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# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

DTIC QUALITY INSPECTED

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14 January 1985

**WORLDWIDE REPORT**  
**TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT**

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EXPERTS URGE CAUTION IN TELECOMMUNICATIONS DEREGULATION

Sydney THE AUSTRALIAN in English 5 Nov 84 p 13

[Text] LEADING international experts in computer communications, attending their seventh international meet in Sydney last week, have called for caution in deregulating telecommunications authorities, an acceleration in the work being carried out on communication standards, and have warned of potential problems for consumers in the ownership and quality of videotex services.

ICCC chairman Mr Jack Curtis said: "Issues have been discussed in practical terms this year at ICCC that were previously only theories. The Japanese, for example, have shown us how they are, in a group effort, implementing their liberalisation of the NTT. It is now clear they will become the first true post-industrial society.

"We have been exposed to the serious problems facing the US following the divestiture of Bell. Americans can no longer be assured of ready access to a coast-to-coast phone line. It has become a jungle."

In a controversial closing session on the characteristics of the information society, Dr M. G. Jones, of the US Consumer Research Interest Institute, warned that the viability of democratic society depended on assertive citizens and consumers influencing the use of information technology to ensure the technology was harnessed to human well being.

"Many consumers in the US experience deep feelings of helplessness and victimisation as they seek to cope--not with grinding poverty--but with the day-to-day tasks of managing their daily lives," she said.

They were confronted with a constant barrage of unedited or opinionated facts and conflicting claims about issues on which they had little independent knowledge.

The videotex industry, transmitting digital data directly into the home, had a market in the US alone estimated to reach \$US12 billion by next year.

The Washington Post recently had reported an estimate by IBM that by 1992 the global demand for information products and services would exceed \$US1.4 trillion.

But a broad segment of the business world, Dr Jones said, encompassing the media, banks, hardware manufacturers, communications companies and retailers, had substantial financial interests in this sector of the economy.

"It is industry acting as the driving force behind the creation and generation of information--rather than serving as its disseminating vehicle," she said.

CSO: 5500/4310

GOVERNMENT URGED TO MOVE ON TELECOMMUNICATIONS

Sydney THE AUSTRALIAN in English 21 Nov 84 p 3

[Article by Jane Ford]

[Text] AUSTRALIA will miss out on the worldwide boom in banking, computer, legal and advertising industries if the Governemtn does not act immediately to encourage the development of Australia as a regional centre for information service industries.

A communications expert, Dr John Langdale, of Macquarie University, Sydney, told a conference in Canberra yesterday that the increasing trend for trans-national companies to centralise their operations in cities such as Tokyo, New York and London could jeopardise Australia's chance of capturing some of the market.

"It will become increasingly difficult for Australia to capture a market share in information services in a competitive telecommunications environment," he said.

He called on the Government to act immediately to develop overall policies which would allow Australia to gain a significant share of the information service industries.

He suggested that Australia could develop superior and more specialised information services compared with the transnational companies, based on advanced communications technology.

Alternatively, it could develop a regional mandate for information services based in Australia and covering the SouthEast Asia and Western Pacific region.

The conference was organised by the Department of Communications to look at the problems of trans-border data flows and future communications policy.

Another speaker at the conference, Professor Robert Hayes, a part-time commis-sioner with the Law Reform Commission, called for the introduction of federal legislation to protect the public.

CSO: 5500/4311

AUSTRALIA

BRIEFS

DEFENSE COMMUNICATION SYSTEM--Australia and New Zealand electronic manufacturers are to receive millions of dollars worth of orders to supply equipment for two new Australian defense communication systems. The head of Plessey Pacific Systems, which is the prime contractor for both projects, Mr (Maud Johnston), said the systems would provide Australia with the most advanced field and strategic communications in the world. One of the projects, worth more than \$100 million [Australian dollars]--that is, about US\$85 million--covers the development and manufacture of a new high frequency combat radio system. The other project, costing \$150 million [Australian dollars], will give the Australian defense forces a secure radio digital system for voice, data, telegraph, and facsimile transmission. [Excerpt] [Melbourne Overseas Service in English 0130 GMT 13 Dec 84 BK]

CSO: 5500/4309

PEOPLE'S REPUBLIC OF CHINA

SWEDISH COMVIK FIRM SIGNS LETTER OF INTENT FOR MOBILE PHONE NET

Stockholm DAGENS NYHETER in Swedish 5 Dec 84 p 11

[Article by Kerstin Kall: "Comvik Investing in China"]

[Text] Comvik, the only competitor of the Telecommunications Administration in mobile telephones, needs about 2,000 more subscribers to break even. Comvik's Managing Director Per Jundin believes they will accomplish that next year. The market for mobile telephones is growing faster than Comvik and the Telecommunications Administration expected.

In the fall of 1981 little Comvik conducted a closely watched conflict with the Telecommunications Administration over the right to remain in the market for automatic mobile telephones, at the same time as the agency was in the process of installing its Nordic NMT system. The conflict was taken up to the government, which decided in favor of Comvik.

Then the agency estimated the market for mobile telephones at 40,000 by 1990.

That figure has already been surpassed. Now the agency believes that there will be 100,000 mobile telephones in Sweden by 1990.

China

In 1981 Comvik had about 2,000 subscribers in Sweden. The goal was to get 10 percent of the market, or about 6,000 subscribers. Today Comvik has about 7,000 subscribers, or nearly 15 percent of the market, 100 employees and sales this year of 60-70 million.

Comvik has also established itself in Hongkong together with Chinatel, and recently signed a so-called letter of intent with two provinces in the People's Republic of China.

According to the statement of intent, the details of which are still to be negotiated, Chinatel and Comvik will, together with Shenzhen Telecommunica-

tions Development build up a mobile telephone service in the Shenzhen Economic Free Zone and in Canton, together with the province Postal and Telecommunications Administration.

In Sweden Comvik must still get a group contribution from the owner, Fagersta/Kinnevik. Next year Per Jundin believes that the firm will break even.

#### Terms

"I believe that we have proved that it is possible to compete with the Telecommunications Administration," said Per Jundin. "But one would of course wish that competition would take place on like terms. We always see the problem of the agency's double roll of authority and business concern."

Comvik's conflicts with the Telecommunications Administration were not ended with the government decision just before Christmas 1981. Last fall Comvik reported the agency to the office of the Commissioner for Freedom of Commerce (NO) for price increases on fixed lines. The increases varied between 11 and 100 percent depending on the length of the lines. The average was 40 percent.

"For us who lease so many fixed lines, such a shocking increase means a great deal," said Per Jundin. In 1984 it increased our costs by 2.5 million kronor. We require over 1,000 subscribers to work in the same net income.

#### Fully Automatic

NO has requested the Telecommunications Administration to justify the price increases, and the agency has obtained a delay until 22 December for its reply.

The conflict 3 years ago was because the Telecommunications Administration did not want Comvik to use a fully automatic system, only operators. Today Comvik has been able to develop its fully automatic system over half of its lines. How quickly the rest will be developed depends on the delivery of lines from the Telecommunications Administration.

9287  
CSO: 5500/2543

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

HEILONGJIANG-BEIJING XINHUA MICROWAVE--The XINHUA NEWS AGENCY will release economic information via a microwave system to all cities throughout the country on 2 January 1985. The special microwave system between Beijing and Harbin City will open at the same time, and the agency will release economic information over it three times a week. Each release will contain 50 economic items, totaling more than 20,000 words. [Excerpt] [Harbin Heilongjiang Provincial Service in Mandarin 2200 GMT 2 Dec 84 SK]

SHANDONG JINAN TV STATION--On 6 December 1984, Jinan city TV station began trial broadcasting through Channel No 6. [Excerpt] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 6 Dec 84 SK]

JIANGSU COAXIAL CABLE--A Nanjing-Shanghai coaxial cable project was completed and passed inspection by the Ministry of Posts and Telecommunications. The newly-built underground long-distance telephone cable, 324 km in length, passes through 13 cities and counties of our province, including Nanjing, Zhenjiang, Changzhou, Wuxi, Suzhou, and Kunshan. When the project is put into operation in a few days, it will offer 1,128 long distance telephone lines, and provide telegram, facsimile transmission, broadcast and other services. [Summary] [Nanjing Jiangsu Provincial Service in Mandarin 1100 GMT 11 Dec 84 OW]

CHINA'S FIRST UNMANNED TELECOMMUNICATIONS LINE--With the approval of the concerned departments, the Heilongjiang Provincial Power Bureau has decided to build an unattended digital microwave communications circuit between Harbin and Mudanjiang, the first of its kind in China. Construction has begun, and the project will be completed by the end of 1985. This highly integrated, high-volume, high-speed line will be 294 km long and will consist of 10 stations with 480 channels operating simultaneously. It will be able to run maintenance-free for 200,000 to 300,000 hours continuously. The system will be able not only to transmit and dispatch telephone signals, but also to transmit control signals, digital signals, relaying signals, and remote signals. The whole operation, including tempo and quality, is controlled by computers and can be monitored on a color screen at the Bureau's headquarters, where the quality of power line transmission is recorded by printer. The line will link the Eastern Heilongjiang Power Grid into the larger Northeastern Power Grid and will raise the degree of automation of the grid. The entire system is imported from Japan and will be constructed under Japanese technical guidance according to the purchase contract. [Excerpt] [Harbin HEILONGJIANG RIBAO in Chinese 19 Nov 84 p 2]

JIANGSU RADIO TELEVISION JOURNAL--JIANGSU GUANGBO DIANSHI BAO [JIANGSU RADIO TELEVISION NEWS], a journal jointly run by the Jiangsu People's Broadcasting Station and the Jiangsu Television Station, will publish weekly radio and television program previews of the two stations as well as program previews of the Central Television Station and the Shanghai Television Station. Beginning in 1985, all other newspapers and periodicals in Jiangsu will not carry weekly radio and television previews. [Summary] [Nanjing Jiangsu Provincial Service in Mandarin 2300 GMT 5 Dec 84 OW]

CSO: 5500/4177

PHILIPPINES

BRIEFS

JAPAN AIDS TELECOMMUNICATIONS PROJECT--The national telecommunications commission [NTC] has launched a big development project in 14 provinces in northern Luzon. According to NTC Commissioner Ceferino Carreon, the project, which will cost more than 7 billion pesos, has been made possible with aid from Japan. Modern equipment to boost telephone, telegraph, and radio services will be installed in towns in the provinces of Abra, Ilocos Norte, Ilocos Sur, La Union, Benguet, Mountain Province, Pangasinan, Bataan, Cagayan, Isabela, Kalinga-Apayao, Nueva Vizcaya, and Quirino. [Text] [Dagupan City DZDL Radio in Tagalog 0455 GMT 21 Dec 84 HK]

CSO: 4211/19

FEATURES OF SYSTEMHOUSE NEW OFFICE INFORMATION SYSTEM NOTED

Ottawa THE CITIZEN in English 30 Oct 84 p F3

[Article by Barbara Crook]

[Text]

After three years of extensive research and development, the office automation product originally developed by a division of Ottawa's Systemhouse Ltd. made its public debut Monday.

The Renaissance office information system was introduced at the official opening of the new corporate offices of XIOS Systems Corp., one of four newly formed operating subsidiaries of Systemhouse.

President Brian Greenleaf said the Renaissance system gives XIOS a unique niche in the office systems market, which is expected to reach \$100 billion a year by 1990.

"Simply stated, Renaissance is the only product that provides a complete office information system," Greenleaf said at a reception attended by Science Minister Tom Siddon, Ottawa West MP David Daubney, other government officials and the news media.

"Rather than teaching people about computers, we taught the computer about people. We make the machine the servant of the person, rather than the other way around."

The system was developed in conjunction with the federal government's office automation trials, sponsored by the Department of Communications, and was first tested at the Department of National Defence.

Each Renaissance system can handle more than 1,000 workstations, and can be used in such areas as personal computing, electronic mail, filing and word processing.

The product, which is based on the increasingly popular UNIX operating system, can also link up to outside databases and services.

Greenleaf said one of the Renaissance system's biggest selling-points is its simplicity. Users can set up the system as they would a "paper-based" office, with electronic in- and out-baskets, calendars, files and reminder systems.

The Renaissance can also work with a paper filing system by keeping track of where each letter or document has been sent and where it is filed.

"(What we call) third-wave computer users want the power of computer communications, without the necessity of spending pre-

cious time learning about the computer itself," Greenleaf said.

"They simply want the ability to create, access, share and process the information they need to do their jobs."

In an interview after the reception, Greenleaf said the Renaissance product is two or three years ahead of products being developed by other systems integrators, companies that specialize in putting together computer software and hardware according to their customers' needs.

He said it is ideal for large organizations such as government departments, international aid organizations, defence-related agencies and industries such as banking, health care and insurance.

XIOS is one of four new operating subsidiaries spun off from Systemhouse effective Sept. 1. The other three companies work in the areas of computer graphics, building control and energy management systems, and software systems for special requirements such as library databases.

CS0: 5520/18

## CONCERN OVER POTENTIAL SALE OF TELEGLOBE CANADA DISCUSSED

Toronto THE TORONTO STAR in English 1 Nov 84 p E1

[Article by Fred Lebolt]

[Text]

When a head of state in the Middle East telephones Ottawa, the call comes in through Teleglobe Canada.

When the Pope recently visited Canada, Europeans were able to watch his tour through broadcasts transmitted by Teleglobe Canada.

In fact, every overseas broadcast — or telephone call or computer hook-up — is transmitted by this profitable government-owned service.

Teleglobe was created by an act of Parliament in 1949 to provide Canada with efficient, commercially-viable telecommunications links to the world.

Through arrangements with Canadian telephone carriers on one side and international organizations on the other, Teleglobe transmits and receives calls and broadcasts by satellite and undersea cable to points outside North America.

**"For sale"**

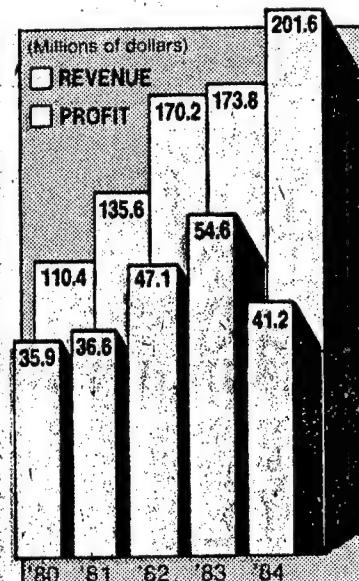
Now, after 35 years as a crown corporation, the new Progressive Conservative government has planted a "For Sale" sign in front of Teleglobe's half-billion dollars in assets.

From a business perspective, the company is seen as a plum in the basket of major holdings of the Canada Development Investment Corp. (CDIC) that Ottawa is offering to the private sector.

Its potential sale has also raised concern about how this vital service will be regulated once it is in the private sector — and whether Canada's sole international communication gateway will remain in Canadian hands.

Most observers expect Teleglobe to directly or indirectly become part of the growing empire of Bell Canada Enterprises.

(BCE chairman Jean de Grandpre said in a recent interview that Teleglobe may be an appropriate purchase by all of Canada's telephone carriers who together could share an equity



**Financial picture:** Profit parallels revenue through '83, but '84 shows widening gap.

position in the company.)

But Industry Minister Sinclair Stevens said Tuesday that several U.S. companies have shown interest in some CDIC holdings, although which businesses were not specified.

"If (Teleglobe) were sold a non-Canadian company, there would be blue murder screamed out there," says Robert Koblovsky, vice-president of the consulting and research firm Angus TeleManagement Group Inc.

Selling Teleglobe to non-Canadian interests "is more than a question of dollars and cents," says Andrew Toller, director of research at the Toronto-based telecommunications research firm Northern Business Information Ltd. "It's a question of sovereignty."

Teleglobe president Jean-Claude Delorme said in an interview that he doubts whether the government would sell Teleglobe to a foreign company.

Delorme added that even if Teleglobe is sold to a Canadian firm the government may decide to keep some control over its activities through regulation.

"Obviously, the government still has the responsibility to monitor" the telecommunications industry, he said.

### Federal body

That would likely translate into regulation through the Canadian Radio-television and Telecommunications Commission, the federal body responsible for overseeing Bell Canada telephone.

But Koblovsky wonders, since the CRTC's plate is already full, "Could it deal with another service or another corporation that it has to regulate?"

Other questions include whether a privately-run Teleglobe would continue to enjoy a monopoly and whether the government should open the doors to greater competition — including from U.S. sources — in the industry.

The tangled web of regulatory issues aside, however, Teleglobe is seen as a good buy, particularly if it is free to move aggressively into new markets.

It has not caused the headaches other CDIC holdings have created for Ottawa.

Unlike de Havilland Aircraft of Canada Ltd. and Canadair Ltd. — two companies also on the auction block — Teleglobe was never a sinkhole for government money.

It does not face the crushing debt burden carried by Canada Development Corp., a firm in which the federal government holds a 47 per cent stake.

And, while Stevens said Tuesday the government decided to sell CDIC's holdings because it believes the "discipline and vitality of the market place will replace the often suffocating effect of government ownership," government ownership has not deterred Teleglobe from recording steady profits since it opened its doors in 1950.

In fiscal 1984, Teleglobe posted a \$41.2 million profit on revenues of \$201.6 million. During the first quarter of this fiscal year, the company's profit jumped 13.4 per cent to \$12.1 million, compared with the same period a year ago.

Whoever picks up Teleglobe will get established communication cable stations in Newfoundland, Nova Scotia, British Columbia and Hawaii.

The buyer also picks up satellite earth stations located in four provinces along with international switching centres in Montreal, Toronto and Vancouver.

Delorme says that, as a private company, Teleglobe would be in a position to issue shares, borrow on capital markets and make investments in other businesses, which could generate a better return.

"That's why I believe privatization is a positive development," he said.

## CROSS-CANADA EDUCATIONAL VIDEOTEX NETWORK TO BE LAUNCHED

Toronto THE GLOBE AND MAIL in English 16 Nov 84 p B13

[Article by Larry Hannant]

[Text]

A new videotex network that will allow a cross-Canada exchange of educational courseware and software should be in place by the end of December.

The network is a project of the Consortium for the Exchange of Telidon and Telematics and Materials (Consortel), a group of 50 Canadian colleges, universities and public libraries that work with videotex.

Materials transferred in the system will primarily be in the North American Presentation Level Protocol Syntax (NAPLPS), an updated version of the Telidon standard, but will not be limited to that format.

The expensive educational materials from TV Ontario and Tel-université in Quebec will be among the content available to network users.

Establishing the network will encourage people to come forward with more videotex material, said Consortel chairman Roger Elmes. "We think there's a lot of it hidden out there."

Consortel has just published a 135-page catalogue of NAPLPS software, courseware and hardware available in Canada, and Mr. Elmes predicted that the

next catalogue, due out in December, will contain two to three times as many listings.

In the first phase of the project, eight institutions will form the backbone of the network. Others can gain access through existing computer communication systems such as DECnet.

With cheap software available from Telidon pioneers such as the Manitoba Telephone System, users of Commodore 64, Apple, IBM, and other microcomputers, are able to receive NAPLPS material.

Mr. Elmes estimated that 100 institutions in Canada use NAPLPS in some form, and so might be potential network users.

Consortel has established the network with the help of a \$258,000 federal Communications Department grant. That financing, part of the previous department contribution to Telidon, ends next March.

Consortel is under the direction of the Inter-Provincial Association for Telidon and Telematics, which has been created from the Education Subcommittee of the Canadian Videotex Consultative Committee. The committee is now defunct.

CSO: 5520/18

**BRIEFS**

RADIO PULA BROADCASTS--Pula, 11 Dec (TANJUG)--On Sunday, 16 December, Radio Pula will begin to transmit its program via its own 10 KW FM transmitter on 100.3 MHZ VHF. To mark the 25th anniversary of its work Radio Pula will also present its new broadcasting schedules: from 1400 to 1900 hours [1300-1800 GMT] on working days and from 0900-1500 hours [0800-1400 GMT] on Sundays and holidays. The new transmitter has been manufactured by the Zagreb RIZ in 8 months, 4 months before the agreed deadline. It cost about 9 million dinars. [Summary]  
[Belgrade TANJUG Domestic Service in Serbo-Croatian [time and date indistinct]]

CSO: 5500/3009

BROADCASTERS CRITICIZE GOVERNMENT MEASURES

PA200204 Caracas EL UNIVERSAL in Spanish 8 Dec 84 p 2-1

[Communiqué issued by the International Association of Broadcasters, Air, on 6 December 1984 in Panama]

[Text] After analyzing the situation of private radio and television stations, especially in this hemisphere, the special commission of the International Association of Broadcasters [Asociacion International de Radiodifusion], which met today in Panama City, reiterates its categorical rejection of regimes that obstruct freedom of speech and violate mankind's fundamental rights.

The commission, which is made up of radio broadcasting leaders from Argentina, Brazil, El Salvador, Spain, the United States, Mexico, Panama, Uruguay, and Venezuela, wish to voice their satisfaction at progress toward the achievement of democracy in several countries on the American continent, including Argentina, Brazil, El Salvador, Panama, Uruguay, and Venezuela.

In addition, the commission expresses its concern about threats looming over private radio and television stations in Venezuela. The government of that country, which is known for having a democratic structure and policy, has decreed measures and plans to decree other measures that, according to reports from the Venezuelan Press Bloc, "violate constitutional laws, obstruct freedom of speech, and hamper the fundamental bases of democracy."

The recent cancellation of the editorial program of the Venezuelan Chamber of Radio Broadcasting Industry, which had been broadcast daily for more than 20 years, and the repeal of laws governing broadcasting over modulated frequency also constitute actions that violate essential principles of the democratic system advocated and defended by this worldwide organization.

The AIR calls on the citizen-president of the Republic of Venezuela, the honorable Congress, and political parties of that country to repeal such measures and not to adopt other measures mentioned in the VII Plan of the Nationa. Those measures affect and hamper private and free Venezuelan media and, in general, violate democratic principles.

The commission, on behalf of AIR member radio broadcasters, reiterates its confidence in the integrity and firmness of the democratic process already underway

in Venezuela. This process commits the government to defend and advance freedom of speech and information. As mankind's inalienable rights, they constitute inseparable values of the dignity of all nations.

International Association of Radio Broadcasters

Dr Luiz Borgerth, president

Panama, 6 December 1984

CSO: 5500/2027

CHILE

NATIONALLY BUILT SPHERICAL ANTENNA REVEALED

Santiago EL MERCURIO in Spanish 9 Nov 84 p C-5

[Text] The first spherical antenna built entirely in Chile and by national scientists is on display at the stand of the Space Studies Center (CEE) of the University of Chile in the FISA industrial fair.

It has already been purchased for 3 million pesos by the National Channel and will be installed at the Chuquicamata mine, the latter thanks to an agreement between both organizations.

That information was given yesterday to the director of the Space Studies Center, Eduardo Diaz Araya, who together with the technical manager, Luis Bello, and the operations manager, Martin Arluciaga, revealed all of the technical specifications, uses and advantages of this antenna.

The structure consists of a spherical reflector 7.5 by 7.5 meters and a feeder-carrying tower. Its basic characteristic is the capability of simultaneously receiving the television signals of up to 10 satellites without the need to reorient the reflector within an angle of more or less 20 degrees. This makes it possible to tune in directly and simultaneously color television programs from such countries as Argentina, Brazil, Venezuela, Colombia and Peru. That is how the visitors to the stand have the opportunity to see programs directly from Mexican and U.S. stations. Regarding it, Diaz Araya explained that "the antenna is linked to the Intelsat V satellite set 36,000 kilometers above the earth and the picture is as clear as the one transmitted by the National Channel. By using another satellite, we could carry the transmissions to Easter Island, so that it represents a low-cost national alternative for implementing the ground terminals of the signal-carrying network of the National Television (TVN) of Chile via satellite. The four-section structure can be dismantled and is easy to transport."

Technological Application

In 1977, the Space Studies Center of the University of Chile began a space technology program for the benefit of the country in which the experience of 25 years of support to the NASA space program was utilized.

In the areas of application of the program are the collection of data from the environment, meteorology, remote sensing and communications via satellite.

It was in the area of communications that the technology suitable for the direct reception of television signals via satellite was developed, all of the work culminating in the spherical antenna that is on display at the FISA today.

Among the practical uses to which images via satellite are put are the search for new mineral resources, the remote sensing of forest resources, the study of the Mapocho River Basin, continuous monitoring of the woodlands, measurement of the "tsunamis" or tidal waves. "Perhaps the most important," indicated Diaz Araya, "is that in another system the images are analyzed and conclusions are deduced with regard to renewable and nonrenewable resources. So much so that there are countries where they have succeeded in detecting new copper deposits."

The antenna, designed by Chilean engineers and in which metallic mesh made by the Copper Manufacturing Corporation (MADECOP) and the aluminum bars of disused antennas were used, can be transported to any part of the territory. "Although the first one was purchased by the National Channel, we are in a position to build another one in 1 or 2 months," the CEE director asserted.

In addition to these applications, through the SARSAT system, the spherical antenna can help to locate and rescue planes and ships in danger. In practice, it has made it possible to save over 250 persons in other countries of the world.

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CSO: 5500/2014

CHILE

BRIEFS

CHANNEL 13 SIGNAL EXTENDED--Chillan [By Mario Landa]--With the forthcoming dedication of the repeater antenna installed on top of Cayumanqui Hill, near the town of Quillon, the Catholic University of Chile Television Corporation will also reach the provinces of Nuble and Biobio through its transmissions on an experimental basis by the end of this week. The signal of the Catholic University Television Corporation will reach Nuble and Biobio directly from Santiago through the antenna in Talca. [Summary] [Santiago EL MERCURIO in Spanish 4 Dec 84 p C4 PY]

CSO: 5500/2028

ANDEAN PACT MINISTERS APPROVE CREATION OF SATELLITE SYSTEM

Bogota EL ESPECTADOR in Spanish 29 Nov 84 p 14-A

/Text/ At the third meeting of ministers of public works, transportation and communications of the Andean Pact countries, the ministers committed themselves to participate in the inauguration of the region "Condo" satellite program. Planning for the design and launching of the satellite will begin in March 1985 once the feasibility studies have been approved and the necessary resources are assured.

The idea of establishing a satellite system to integrate the five-member countries of the Cartagena Agreement originated more than 10 years. Up to now it has been approved by the governments of Colombia, Ecuador, Venezuela, Bolivia and Peru.

At the closing ceremony of the "ministerial summit meeting," a resolution was signed authorizing the board of directors of the Association of Andean State Telecommunications Enterprises (ASETA) to open talks with Intelsat on the use of the orbital space to be exploited jointly on the basis of the needs of each of the five nations of the area.

The management, administration and operation of the satellite system will be assigned to an Andean multinational enterprise, the formation of which is to be approved both at the next meeting of the ASETA board of directors and at the next meeting of the ministers.

It has been learned that the project will begin with the renting of transponders provided by Intelsat and later their own satellite will be bought.

It was also proposed to promote and arrange for the creation of national committees consisting of potential public and private subscribers to the satellite service to insure the efficient use of the system.

They decided that each country should determine and evaluate within 3 months at the latest their requirements for satellite capacity for TV, telecommunications and other services.

### Andean Multinational Enterprise

Once the necessary resources have been assured, ASETA will let contracts for the designing of their own regional satellite and for consultant services, including the preparation of the terms for bids to acquire the space elements and the contract for launchers.

They will also consult and hold talks with the administrations of the other member nations on any commitments to obtain satellite system other than that of "Condor" and Intelsat.

They requested the ASETA general secretariat to prepare and present at the next meeting of the association's board of directors and at the next meeting of the ministers a feasibility study on the creation of an Andean multinational enterprise to administer and operate the satellite system.

### Joint Preservation

They also agreed to appoint a committee to conduct appropriate consultations so as to be able to make a joint presentation to the International Telecommunications Union for advance publication and to comply with other procedures set down in regulations so as to obtain international registration of orbital positions and frequencies for the Andean System of Condor Satellites.

If joint presentation is not allowed, the Andean Pact countries' ambassadors to the UN international bodies with Geneva headquarters will be asked to select one government to make the advance publication and comply with the regulatory procedures in its own name and in those of the other countries.

### Amateur Radio Operators

Noemi Sanin Posada, Colombian minister of communications, also announced the enactment of common legislation in the Andean region concerning amateur radio operators.

On the installation of the satellite she said that with this telecommunications system "borders will be eliminated and our peoples will really be neighbors, whatever the distance separating them may be. Cartagena by this means will be as much a neighbor of Iquitos as Caracas will be of Santa Cruz or the Galapagos Islands."

She said, "There is a consensus among us that decisions on this project cannot be put off indefinitely. If we do not reserve and occupy orbital positions and frequencies suitable for our possibilities we will have difficulty using this resource at a level commensurate with our development."

She pointed out, "We should not forget that the great space powers are already taking advantage of unfair regulations relative to access to orbital space."

Noemi Sanin said that when we consider our limitations, which are almost exclusively economic, we realize the promising fact that with fraternal cooperation among the Andean countries and with the commitment to integration which should be our hallmark, none of these limitations is insuperable.

BRIEFS

TELECOM SUSPENSION OF SERVICES--Bogota, 9 Dec (AFP)--Communications services in Colombia will be suspended 3 hours every day for an indefinite period of time beginning tomorrow, Monday, as a result of the collapse of the negotiations between the workers and the state enterprise, National Enterprise for Telecommunications [Telecom]. This was announced today by Heberto Lopez, president of the Telecom workers union, which has some 15,000 members throughout the country. He also said that during the suspension of services, which will affect long distance telephone and telex services, the workers will hold meetings in different places. According to Lopez, the negotiations collapsed when Telecom refused to discuss some of the demands the workers submitted, particularly those referring to a wage increase. Lopez also said that in the next hours Telecom workers will hold a national consultative council to decide on a nationwide strike, should Telecom insist on what he termed intransigent attitude. [Text] [Paris AFP in Spanish 0312 GMT 10 Dec 84 PA]

INRAVISION TELEVISION NETWORK--President Belisario Betancur today issued decree 3100 authorizing the creation of INRAVISION [National Institute of Radio and Television] regional television networks throughout the country, and decree 3101 by which INRAVISION is authorized to sign television contracts in Antioquia, extending its television service to that region. A Regional Council was created to regulate television in Antioquia, and will be headed by the communications minister and the governor of this department. [Excerpts] [Bogota Cadena Radial Super in Spanish 0000 GMT 21 Dec 84 PA]

TWO REGIONAL TV CHANNELS--Bogota--Regional television channels will be a reality as of today. The national government will issue two decrees that give legal status to regional channels and authorize the first of them to operate in Medellin. The first decree sets the procedure for the operation of regional channels, their commercialization, programs to be aired, as well as their schedules and duration, and those authorized to exploit them, among other things. The second decree creates an association between the Colombian Government and the Antioquia Departmental Enterprise [Empresa Departamental de Antioquia], EDA, so that the first regional channel can begin to operate in Medellin as of February 1985. At the beginning, programs will be only cultural with only commercial advertisements. [Jose Maria Bolanos] [Text] [Bogota Emisoras Caracol Network in Spanish 1215 GMT 13 Dec 84]

'ALTERNATIVE' NEWS MEDIA CRITICAL TO LATIN AMERICA IDENTITY

Havana OCLAE in Spanish No 5, 1984 pp 5-7

[Article by Enrique Lopez Oliva, professor of Religious History in America at the Universidad de Havana and member of Commission for the Study of the History of the Church in Latin America: "Attack on the Mind"]

[Text] The mass media assume an increasingly important role in the sociopolitical and cultural life of society. There are now more than 30,000 radio stations, more than 1.3 billion receivers and more than 500 million televisions in the world. Every day 8,200 newspapers are published with a circulation of more than 440 million copies. There are also tens of thousands of other periodicals and a daily release of 1,800 new book titles. Specialists on this subject talk about an "information explosion" in the last three decades. The question arises: Has this "information explosion" really opened the way for objective information for the large masses in world society, especially the popular classes?

It is true that there has been notable progress in the technical sphere of communications as in printing. The scientific-technical revolution now facilitates possibilities of communication barely dreamed of in the last century. At the same time, new possibilities for instant influence over an enormous audience have been opened. The large capitalist powers, headed by the United States and the business circles, make great efforts to intimidate the large masses, making them tractable and influencing their political opinions, tastes, desires and aspirations. Resorting to the most sophisticated means, they attempt to violate the conscience and will of men and impose opinions, decisions and certain social acts on them.

When the coalition of rightist forces headed by President Ronald Reagan came to power in the United States in 1980, the ideological battle in the sphere of communications and the efforts to impose U.S. hegemony on the world intensified notably. Today we can speak of a "journalistic terrorism" against the forces for peace, progress and the liberation of the peoples. The battle for mind control has reached an unprecedented level with a violence similar to the eve of a world war.

The power of information in our society, a society we can call "informed," is notable since the mass media guide and manipulate human behavior to a great extent.

The problem not only includes the domination exercised over mass media but extends to other key information means for development like computers. A specialist at CENDES [Development Studies Center] of Universidad Central de Venezuela, Judit Sutz, stated: "Information is imported massively in many cases and always as a solution imposed by the manufacturers of the equipment with the subsequent sequel of irrationality and lack of control. Computers proliferate in public administration, the bank systems and the universities with a political and social impact of growing importance."

We are not going to focus on this other aspect of great importance. We will only note that, in this field, there are exporters of "raw data" and importers of "processed data." This area acquires increasing importance for finance and international trade leading to dependent consumers reinforcing the dependency through more and more sophisticated technologies. An examination of the continent shows that the countries of greater economic potential are, at the same time, the most penetrated and dominated by U.S. multinational corporations.

Facing the sociopolitical implications of the new technologies and increasingly sophisticated mechanisms of domination, variants based on different social levels and from different ideological and political perspectives appear.

Chilean researcher Raquel Salinas Bazcur noted that a variant has been introduced in recent years "that is becoming the idea-force of a new stage: the concept of alternative communications." The Chilean researcher still considers this confusing with "many definitions that are not always compatible."

What does alternative communications consist of?

To the Chilean researcher, many "alternative communications" projects do nothing but reproduce, under a different label, the basic plan of pseudocommunication; the receivers continue to be receivers, passive and manipulated. The value of the information disseminated by alternative networks must be demonstrated and mechanisms must be created so that the users become generators of information.

Popular organizations, circles of progressive intellectuals, various base communities (religious, women's, neighborhood committees, peasant communities, etc.), student associations, progressive journalists, social researchers and others have been developing different mechanisms of mass communication, some even connected with alternative political projects--that is, in favor of a social, political and economic change.

Alternative communications are a necessary response by broad popular sectors to the information manipulation of the so-called "large press" and the multinational news agencies. In recent years a protest movement in the information

field has appeared in the Third World countries. Today it offers an information perspective more in keeping with popular interests. We can cite SALPRESS [expansion unknown], Nueva Nicaragua (ANN [New Nicaraguan News Agency]) and ALASEI [Latin American Agency of Special Information Services] as well as a number of centers to defend human rights that evaluate events based on their effect on the popular masses.

Also in recent years pertinent research institutions and "Centers for Systematization of Information" or "data banks" have appeared. They offer their services to progressive groups although many of these new institutions face economic limitations. If they suddenly receive resources from mysterious "foundations," they then become aligned with the dominant system.

Topics like the situation of the Indians, hunger and food policies, female participation and problems, arms trade, ecological problems aggravated by the irrational exploitation of nature by the large multinational corporations, urban problems (shanty districts, etc.), union and peasant movements, youth problems, popular organizations in general, popular culture, human rights, economic problems of the popular sectors, etc., are covered by these institutions.

Some reveal that their intention is to offer "alternative information, understood as that which originates directly in the popular sectors. Due to its classist nature, it does not usually have diffusion in the mass media controlled by the bourgeoisie. It is also that which is produced in the bourgeois media but subjected to a process of decodification and recodification based on the classist concept of society." This was stated by a Christian center of this type: CENCOS [National Center for Mass Media] in Mexico.

Theoreticians--who already work in this field--of "alternative information" maintain that "the rules of the game in manipulating information and alternative communications are different from those for simple professional journalistic operations. It takes a long time to win the confidence of the popular sectors but it can be obtained easily because of incorrect handling of known information or its superficial treatment isolated from its context."

Other sources say that their objective is not to follow "political events" from a perspective of "palace intrigues" or the so-called "high politics" but to present events from a perspective of "the life of the peoples." They show how the different events have impact, change or influence the lives of workers, peasants and urban dwellers. They are interested in serving as channels for the "voiceless" sectors, presenting testimony from the bases through articles and interviews that reflect the lives and struggles of the people, especially the poorest and most oppressed.

We are in a struggle today that involves "the defense of the Latin American cultural identity facing a growing multinational cultural invasion," according to the final declaration of the Latin American Seminar on "Church and the New World Order of Information and Communications." It is a struggle for a new order of relations, for an in-depth and real change in structures, to put an end to the mechanisms of domination and open up a world of peace, justice and human coexistence.

The struggle against the imperialist domination over mass communications is part of the struggle for the liberation of the peoples and for the construction of a more just and human society where there are no oppressors or oppressed.

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PERU

BRIEFS

PERCOVICH ON TELECOMMUNICATIONS PROGRESS--In this country, with its rugged terrain, it is necessary to complement the road system by developing communications. It is obvious that the nation is integrated through communications which also contribute to normal economic activity and, fundamentally, support internal security. Important progress has been made to this end. In 1984, 32,382 new telephone lines were installed throughout the country, thus doubling the installed capacity that existed when this government assumed power. The rural communications plan is also being executed. In this first stage, this plan set up communications with 289 new rural towns. The telecommunications infrastructure has been expanded by means of six domestic stations for communications with satellites, and recently the second ground station for international communications was put into service in Huancayo. Thus, the capacity for international communications has been doubled. [Excerpt]  
[State of the Union address to Congress by Prime Minister Luis Percovich Roca on 10 December in Lima--live] [Lima Television Service in Spanish 0000 GMT 11 Dec 84 PY]

CSO: 5500/2022

JORDANIAN MINISTER DISCUSSES ARABSAT

London AL-TADAMUN in Arabic No 82, 3-9 Nov 84 pp 29-30

[Interview with Muhammad Chadub al-Zabin, minister of communications, by Najih Khalil: "Jordanian Minister of Communications to al-TADAMUN: Arab Satellite to Be Launched This Month and Its Commercial Operation Will Begin at Outset of 1985; Arab Countries Confront Zionist Attempts to Launch Counter-Satellite to Jam Arab Satellite"]

[Text] Amman--The Arab satellite will be launched in the current month of November. The launching of this satellite, known as Arabsat, is an Arab challenge at the technological level, considering that it is considered a high-level qualitative leap in bolstering communication between the various parts of the Arab world, either in establishing direct contacts that have not been available so far or in the satellite's capacity as a reserve for currently existing communications.

Like the other challenges with the Zionist entity, the Zionist entity's communications administration has announced its plan to launch in 1986 an Israeli satellite positioned at a distance of 4 degrees from Arabsat. Despite this, Arab efforts are proceeding normally. The Arabsat is considered an enormous leap in strengthening the Arab world's cultural, educational and national ties and combining all the Arab activities and re-transmitting them from a single center to all parts of the Arab world.

In an endeavor to clarify the facts and to explore the visualization concerning Arabsat, we have conducted the following interview with Muhammad Chadub al-Zabin, the Jordanian minister of communications:

[Question] Can you tell us about the latest developments concerning the launching of Arabsat?

[Answer] The processes of manufacturing the satellites have made long strides, with the final tests on the first satellite completed at the end of last August. This satellite will be shipped to Kourou Island in the Gulf of Mexico to be launched by the Ariane Rocket under the supervision of European Space Agency (ESA) if matters proceed normally.

The second satellite is in the phase of initial testing. All its parts have been assembled and its scheduled to be launched as a reserve satellite by the U.S. Space Agency (NASA) in May 1985.

The third satellite is in the final stage of assembling and will be stored on ground as a reserve to be launched at the right time.

The first satellite will be launched this November and will reach its final position nearly 2 months later. It is expected that its operation will begin and that the satellite will be tested at the beginning of 1985.

[Question] What about the Israeli challenges to confront the Arab satellite and what is the Arab position required for this confrontation?

[Answer] The Zionist entity's communications department has announced its plan to launch an Israeli satellite in 1986, positioning it at a distance of 4 degrees from the Arab satellite, to cover the Arab area and the Mediterranean basin and to use the same oscillation range in which the Arab satellite will operate. An official complaint has been submitted to the International Telecommunications Union on this issue.

On the instructions of the Arab league, the Arab administrations have notified the International Frequencies Board on behalf of Saudi Arabia, the headquarters of Arabsat, of all the measures to deal with the ramifications of launching of the Israeli satellite.

[Question] Are there security precautions that have to be taken upon launching the Arab satellite and what are these precautions?

[Answer] A number of security measures and precautions have been taken to avoid any technical or operational dangers involving the satellite's safety. These measures include:

Establishing in Riyadh a satellite control station supported by a second control station in Tunisia to act as a reserve.

A certain cipher has been established to open contact between the control stations and the satellite to prevent the satellite from obeying any instructions not issued by the Arab control stations.

Three satellites have been built, the first is the main one and the second is similar to it and the third a reserve on the ground, with transmission shifted to the second satellite if the first goes out of order and with the third launched in case the first two fail.

The satellite will be insured for a period of 180 days, beginning with the moment of launching. This is the sensitive and critical period in a satellite's life. The insurance covers the costs of the satellite and of the launch operation in case of failure either because of the satellite itself or because of the launching pad.

[Question] What is the number of channels used in this satellite and what is the Arab countries' share of these channels?

[Answer] The Arab satellite offers 26 channels distributed as follows:

Ten satellite channels to serve the telephone, telex and cable traffic and to serve the regional communications. This is the equivalent of 7,000 telephone channels that will meet the Arab citizen's needs until the end of the satellite's lifespan in 1991.

Two satellite channels offering a telephone service equal to 3,000 telephone channels.

A television channel for the exchange of television programs between the administrations according to advance reservation.

Nine satellite channels to serve local communications within the same country through leasing. The capacity of 9 satellite channel amounts to 850 telephone channels and these channels will be leased according to need.

A high-radiation channel for direct television transmission received by ground stations. This channel will be leased almost freely and will be put at the disposal of the administrations through coordination with the Arab Telecommunications Union. This is in addition to 3 reserve satellite channels.

[Question] What are the Arab programs which have been prepared to feed to the Arab satellite?

[Answer] In its first generation, the Arab satellite is a telephone communications satellite, along with the telex, cable and radio photo services these communications offer. Moreover, the satellite also provides for the exchange of television programs and will make it possible to exchange programs between the administrations at a larger scale, thus helping to strengthen the Arab world's cultural, educational and national bonds. This is in addition to a pioneering role which the Arab Telecommunications Union will perform by gathering Arab news and activities and re-transmitting them to all parts of the Arab world from a single center.

The Arab satellite is distinguished from the other international satellites by the fact that it contains a high radiation television channel that makes it possible for small ground stations to receive television programs 24 hours a day. These stations will be manufactured locally and will be designated to serve cultural, educational and information objectives.

[Question] What is your visualization of future inter-Arab and Arab-international communications in case the Arab satellite is launched?

[Answer] The Arabsat project is a high-level leap in strengthening communication between the various parts of the Arab world, in establishing new communications that did not exist before and in bolstering the communications existing at present. This means it will provide a final solution to the limited and difficult Arab and foreign communications.

[Question] What will the communications situation be between Jordan and the Gulf states within the framework of Arabsat and of the concluded agreements?

[Answer] There is firm cooperation between the Hashimite Kingdom of Jordan and the brothers in the Arab Gulf. At present, direct communications is established through the Intelsat network. Most of the future traffic will go through the Arab satellite while maintaining a limited number of Intelsat channels as a reserve. This is in addition to the regional linkage-by-ground projects which are under implementation and are considered the ideal solution to secure long-range needs through microwave and coaxial cable projects.

[Question] What about the future projects of the Jordanian Ministry of Communications and what are the difficulties facing them?

[Answer] The Telecommunications Agency is implementing ambitious projects with a 5-year development plan that covers all telecommunication aspects. These projects include building new automatic exchanges and expanding the existing exchanges, building new distribution networks and enhancing the efficiency of the old telephone lines. This is in addition to the car telephone project which will be implemented this year, the microwave and coaxial cable projects with the neighboring Arab countries, such as Iraq, Saudi Arabia and Syria, and the project to strengthen the capabilities and resources of the Telecommunications Academy established by the Jordanian Communications Agency to graduate a sufficient number of students specialized in the various fields to meet the country's need.

As for the problems facing the Communications Agency in implementing its projects, they are confined to securing the funds necessary to implement the agency's numerous projects which are scheduled close to each other and which have equal priority.

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CSO: 5500/4502

UN AMBASSADOR TELLS STAND ON INFORMATION FLOW

Dhaka THE BANGLADESH OBSERVER in English 14 Nov 84 p 10

[Text]

NEW YORK, Nov. 13.—Bangladesh has underscored the need for concerted efforts to improve the communication infrastructure of the developing countries for promoting early establishment of the new world information and communication order, reports BSS.

Ambassador Khwaja Wasiuddin, Permanent Representative of Bangladesh, in a statement in the Special Political Committee of the UN General Assembly yesterday underlined the importance of changing the dependent status of the developing countries on the matter to one of equality with the developed world. He said that the situation in areas of communication at present was not conducive to a free and balanced flow of information among the developed and the developing nations. The developing countries lagged far behind the developed ones in respect of the technological and other resources which had given rise to serious defects in the present global communication patterns, he observed.

Ambassador Wasiuddin emphasised the need for cooperation among the developing countries themselves in matters of communication. He pleaded for lower media tariffs among these countries and said that a major obstacle to the uninhibited circulation of information was the very high level of telecommunication tariffs which the developing countries were required to pay.

Speaking about the role of the UN Department of Public Information, he said the cooperation between the organisation and the Non-aligned news agencies pool should be further strengthened.

Ambassador Wasiuddin said that at a time when the UN was facing what had been described by some sections of the world public opinion as a crisis of confidence, the Department of Public Information should undertake appropriate publicity campaign to promote renewed interests in the United Nations and publicise its objectives and achievements in an appropriate manner.

CSO: 5550/0021

#### CLOSER COOPERATION WITH PAKISTAN IN MEDIA COMMUNICATIONS

Dhaka THE BANGLADESH OBSERVER in English 10 Nov 84 pp 1, 8

[Text] Information Minister Mohammad Shamsul Huq on Friday described his visit to Pakistan as fruitful and said the two countries maintained identical views on forging closer cooperation in media communication, reports BSS.

On his return from a five-day visit to Pakistan the Minister told BSS that during his meeting with his Pakistani counterpart Raja Mohammad Zafarul Huq the two sides agreed in principle on certain matters to increase bi-lateral cooperation in media communication.

We have agreed to examine if the tariff on Press telegram could be reduced as Bangladesh and Pakistan are members of Non-aligned Movement Organisation of Islamic Conference (OIC) and South Asian Regional Cooperation (SARC), he said.

Mr Huq pointed out that Bangladesh and Pakistan had agreed to exchange television and radio programmes between the two countries and also exchange visits by Journalists.

He said it was agreed in principle that Bangladesh news agency BSS and Pakistani news agency APP would post their correspondents in Islamabad and Dhaka respectively to promote cooperation in the field of media communication.

During his stay in Islamabad, the Information Minister called on Pakistan President Gen. Mohammad Ziaul Huq. He also visited Lahore and Karachi.

The Minister was received at the Zia International Airport by Pakistan Ambassador in Dhaka Mr. Tanvir Ahmed Khan.

CSO: 5550/0020

RADIO NEWSMEN UNHAPPY OVER DELAY IN ASSASSINATION REPORTS

Calcutta THE STATESMAN in English 10 Nov 84 pp 1, 7

[Text] New Delhi, Nov 9--Professional journalists in All India Radio are unhappy over the delay in broadcasting the news of Indira Gandhi's death on October 31. The delay was caused because prior official clearance was needed.

"We are feeling miserable that as a news organization we could not break the news in time," a journalist said. "Indira Gandhi was no ordinary person, her death was no ordinary news, we had that news quite early, yet we could not broadcast it, our hands were tied."

All India Radio, according to what one learnt from several sources, was, in effect, prevented from broadcasting the news until the evening. "By then, almost everybody else had announced the news and we became the laughing stock of the world," one broadcaster said.

AIR, it is said, has to obtain clearance from appropriate officials in the event of the death of two persons: the Head of State and the head of the Government. There is also a "drill" whereby the clearance has to come from the Union Home Secretary.

The professionals said that that "drill" need not necessarily be followed in breaking news of such dimensions. Anyone with sufficient authority in the Home Ministry, or in the Information and Broadcasting Ministry, or in the Cabinet Secretariat or even in the Prime Minister's office, could have given the clearance, in the absence of the Home Secretary. But none of them did, although AIR reportedly knocked at every conceivable door.

Was what happened caused by a fear that announcement of Indira Gandhi's death may spark off trouble or have other unfortunate repercussions?

"If that were the purpose, it was clearly defeated," the professionals said. "Disturbances broke out even before we went on the air finally. There was no justification whatever for preventing us from broadcasting the news."

The Media Advisory Committee of 1982 had in its "news policy for broadcast media" laid down that in such situations "while caution is imperative, any withholding of factual information will be counter-productive."

The point is also made that the News Services Division is headed by responsible men "who on no occasion had acted in an irresponsible manner." They are trusted implicitly in several matters. "If you trust them in other matters, why not trust them to make these decisions also?"

"There can just be no comparison between AIR and the BBC. They are two incomparables. The BBC is so independent that, during the Falklands war, it could broadcast news that embarrassed the British Government itself."

The present instance is by no means the first time AIR has been way behind other broadcasting organizations and even Indian news agencies.

When Nehru died, even Parliament which was in session then was fed the fib, by the then Home Minister Mr Gulzari Lal Nanda, that the Prime Minister was "seriously ill" and the House would be duly "kept informed." AIR had to dutifully echo that line in its news bulletins, even though its news-gatherers knew that Nehru was dead. AIR could break the news only after it was announced in Parliament, "the BBC had earlier given the news," one professional recalled. Similar delay occurred when President Zakir Hussain died in mid-1969.

CSO: 5550/0022

## BRIEFS

TELEX TO SHIPS--Bombay, November 23--A direct telex service to ships at sea via the international maritime satellite (INMARSAT) has been introduced by the Overseas Communications Service (OCS). The fully-automatic INMARSAT telex service can be used by telex subscribers in the country to contact ships in any region in the Indian, Pacific and Atlantic oceans, using access codes 581 (Atlantic ocean region), 582 (Pacific) and 583 (Indian) and the ship's identification number. With this, the fully-automatic mode is now available to Indian telex subscribers to 175 destinations. The use of this facility is limited insofar as Indian ships are concerned as only a few (six or so) ships have the shipboard terminal for satellite communication. The Indian coastal earth station for INMARSAT proposed at New Bombay is still to come up. Messages through the OCS are now routed through the other coastal stations in the region. [Text] [Bombay THE TIMES OF INDIA in English 24 Nov 84 p 15]

CSO: 5550/0023

CHRONOLOGY OF SUBVERSIVE RADIO STATIONS IN SOUTHERN AFRICA

Johannesburg THE SUNDAY STAR in English 2 Dec 84 p 21

[Article by Stephen McQuillan: "Meet the Broadcast Bullies"]

[Text]

**M**ystery broadcasters established 11 clandestine radio "stations" during the past eight years in a massive propaganda operation to undermine the governments of Zimbabwe, Angola and Mozambique.

Messages of subversion, hatred and fear have been hallmarks of the campaign.

Early broadcasts, supporting the Mozambique National Resistance (MNR), are believed to have had the approval of the Rhodesia government. Later transmissions are thought to have been masterminded in South Africa.

Voice of the Black Cockerel Resistance (VOBCR), Voice of Truth (VOT), Radio Truth (RT), an unnamed Spanish broadcast and mysterious tests of Irish music are continuing today.

Broadcasts of Voice of Free Africa (VOFA), Voice of the Mozambican National Resistance (VOMNR), Voice of the People of Namibia (VOPN), Radio Big Daddy (RBD), Radio Danny Boy (RDB) and Radio Voice of Free Zimbabwe (RVFZ) have ended.

The music stations RBD and RDB are believed to have been pilot broadcasts which established the most suitable frequencies for the subversive broadcasts today believed to emanate from South Africa.

Today's tests of Irish music are believed to be paving the way for yet another clandestine station.

The BBC Monitoring Service confirmed RT and VOBCR were broadcast from South Africa. Observers believe nine stations have been broadcast from a central propaganda base.

This is how the propaganda operations progressed:

● **1976:** The VOFA was introduced. Anti-marxist and pro-colonial Portuguese, it supported the Mozambique National Resistance. The station used a 100 kilowatt medium-wave transmitter — nicknamed Big Bertha by the Rhodesian Secret Service — at Gwelo (now Gweru). The transmitter was installed in 1968 ostensibly to provide better nighttime reception of the general Rhodesia radio service. But the transmitter was last heard regularly in 1972 and briefly in 1974.

"The Rhodesia Broadcasting Corporation denied knowledge of the station but an engineer one night slipped-up and went straight into a relay of the RBC's African Service immediately after the VOFA broadcast," said radio broadcaster Mr Richard Ginbey who has monitored the clandestine stations for years. "Obviously realising its mistake, the station hastily left the air."

● **1976-1979:** The RVFZ emerged, a "black" clandestine station (meant to look as though it originated from "the enemy"). Evi-

dence indicated it was run by the authorities in Salisbury. The station operated over two low-powered shortwave transmitters four hours daily.

● **1979:** In late 1979 three stations emerged — the VOT, VOPN and an un-named Spanish broadcast aimed at Cubans in Angola: "Buenos Noches Amigos Cubanos" (good evening Cuban friends). The stations interchanged frequencies.

● **SEPTEMBER 1979:** A two-day short-lived appearance by RBD. Music and announcements were in South African-accented English: "This is Radio Big Daddy with music for your listening pleasure." It was widely reported by shortwave listeners in South Africa.

● **NOVEMBER 1979:** A one-day test, thought to be the first, of RDB. The transmission lasted 30 minutes. Then followed a week of simultaneous but different programmes by RDB and RBD. "Pirate stations, if that's what they were, couldn't go on this long at such a good signal strength on regular shortwave bands unnoticed," said Mr Ginbey. After the first week of November, neither station was heard again.

● **1980:** Shortly before independence in Zimbabwe in April, the RVFZ closed and VOFA broadcasts switched to shortwave. The appearance of VOFA on a frequency used earlier by RDB confirmed earlier suspicions that airwave buccaneers RDB and RBD were not just radio pirates.

The VOFA station, located somewhere in an arc across northern and

north-eastern Transvaal (excluding Venda), was firmly in the hands of the MNR, say observers.

The VOCBR, representing Angola's Unita movement, started broadcasts.

● **OCTOBER 1980:** The VOT moved lower down on the short-wave bands, later joined by VOCBR and VOPN. The VOPN was anti-Swapo, but moulded in Swapo-style broadcasts.

● **JULY 1981:** The VOPN disappeared. Africa Media News, presented on Radio Netherlands, said: "The appearance of Voice of Free Africa on 4 762 khz and the three-station operation on 4 950 khz — with identical audio quality — lends evidence to my pet theory that Radio Big Daddy and Radio Danny Boy originated from facilities approved by the authorities in the intermediate region." RBD and RDB had used 4 762 khz earlier.

The un-named Spanish broadcast started to appear regularly on 7 210 khz — another frequency used by RDB and RBD in tests during late 1979.

● **AUGUST 1981:** The Spanish broadcast moved to 6 045 khz, where it has remained since.

● **SEPTEMBER 1981:** VOFA was heard on 4 762 khz and 4 950 khz. Africa Media News said: "The unexpected paralleling of the transmission confirms the long-held theory that this and other so-called clandestine stations are in fact one."

● **DECEMBER 1981:** VOFA reduced scheduling to two half-hour broadcasts a day.

● **APRIL 1982:** VOCBR extended broadcasting time.

● **JULY 1982:** The Spanish broadcast turned-up briefly on 4 762 khz.

● **AUGUST 1982:** VOFA added commentaries in English twice a fortnight. The station had used English occasionally in 1978.

● **NOVEMBER 1982:** VOCBR extended broadcasting time.

● **MARCH 1983:** RT started tests. The half-hour broadcasts featured a bird-call interval signal and repeated announcements inviting listeners to stay tuned for regular broadcasts in English, Shona and Sindebele.

RT tested another frequency. Africa Media News said: "Capitalising on the sorrow and misery plaguing

ing Zimbabwe, a clandestine radio station called Radio Truth has appeared. By its very name it suggests that the 'Truth' will reflect the views of opponents to the Mugabe government from a secret, safe haven in a neighbouring country.

"Radio Truth should be neither condoned nor condemned. Unusual circumstances call for unusual measures. But the situation has clearly created a new dimension in Southern African politics, already highly volatile."

● **APRIL 1983:** RT adopted the frequency of the second test and increased broadcast time to 50 minutes nightly.

VOFA went off the air.

● **MAY 1983:** Test music appeared on another frequency as RT was on the air. Said Africa Media News: "It sounds suspiciously like it might be from the elusive base hosting a number of clandestine broadcasts in Southern Africa."

Days later RT was heard on the test music frequency and its original frequency.

● **MAY 1983:** RT operated two separate services at 7 pm — one in English and one in Shona and Sindebele.

● **JUNE 1983:** RT broadcast: "The staff of Radio Truth is comprised totally of Zimbabweans. We oppose a one-party state and we oppose strongly the communist ideology which Mugabe is trying to force upon us. Neither Mugabe nor his party, ZANU-PF, has the right to force communism or a one-party dictatorship upon Zimbabwe."

"The ZANU-PF regime in Zimbabwe stands accused of human rights violations, violations of the Lancaster House agreement and violations of the Zimbabwe constitution."

Observers said an unusual feature of the RT morning transmission was that it was nearly always in the upper side band.

Said one expert: "Upper side band is part of the single side band system more commonly used in point-to-point communications and by radio amateurs. Radio ham transmitters have the capacity to use either SSB or normal AM. Broadcast transmitters do not have this facility, which points to the clandestine stations using equipment more likely associated with the military."

● **JULY 1983:** After a three-month absence — probably due to turmoil within the MNR — VOFA returned to the air as the VOMNR.

● **AUGUST 1983:** Musical tests appeared with no identification but featured South African pop music — a feature common on all the clandestine stations. The quality of transmission matched the other stations. The music stopped in March 1984.

● **NOVEMBER 1983:** VOMNR adjusted its frequency to avoid interference from Trans World Radio (Swaziland).

● **DECEMBER 1983:** VOMNR included fortnightly 10-minute commentaries in English, following the same pattern as VOFA.

● **MARCH 1984:** VOMNR transmissions ended.

● **OCTOBER 1984:** Irish musical tests appeared on a new frequency. Again, there was no obvious reason behind the tests other than engineering experiments.

## How They Cram the Airwaves

PROPAGANDA experts waging a war of words through the airwaves are cramming radio bands with their subversive messages.

Shortwave experts say the average listener can expect to pick-up 16 broadcasts — including propaganda — on the 60 m band alone.

"A good way of pinpointing an area in the 60 m band is to tune to the Time Signal Station ZUO at Olifantsfontein on 5 000 kHz," said radio expert and broadcaster, Mr Richard Ginbey. "Fine adjustment is then required to pick-up broadcasts up and down the band."

Problems occasionally arise, says Mr Ginbey, because the frequencies are so close.

When the Voice of Free Africa used 4 762 kHz it was clashing with Trans World Radio on 4 760 kHz. The Voice of Free Africa later moved to 4 772 kHz.

"Now the frequencies are crammed into a very small area on a portable radio, the bandwidth — the degree to which the received signal is heard at a pleasant level — is normally quite wide, so that stations 2 or 3 kHz apart often suffer interference," he said.

"The transmitters used by the clandestine radio base appear to be modern with the ability to tune over a wide range of the

broadcast spectrum — most certainly to all frequencies between the 20 and 19 m bands, so they can change frequencies when they like."

"To give an air of legitimacy to their broadcasts, they have opted for frequencies allocated for broadcasting rather than choose frequencies in between bands where they'd have less interference. Although one can never be sure these days — so many "legal" radio stations have had to resort to out-of-band frequencies in order to be heard."

But most clandestine stations around the world choose frequencies just off regular bands, says Mr Ginbey.

CSO: 5500/51

PRESIDENT MASIRE ANNOUNCES NATION'S FIRST TELEVISION SERVICE

Gaborone BOTSWANA DAILY NEWS in English 30 Nov 84 p 1

[Text]

**GABORONE:** Botswana is to have its own national television service, the President Dr Q.K.J. Masire announced here yesterday.

Commissioning three new 50 kilowatt Short-Wave transmitters at Sebele Transmitting Station, Dr Masire said broadcasting in Botswana would not be complete without a national television service.

Cabinet ministers, members of the Diplomatic Corps, the Chief Justice, senior government officials and invited guests at the ceremony were also assured that Government was commissioning studies on the subject and that in the normal round of staff training, an element of television will be included from now on.

"There remain problems of money and manpower on projects like this, but we believe such constraints are only short-term and in the not too distant future we shall have our own national television service," the President explained.

President Masire said Botswana deliberately concentrated its efforts on radio in recent years because the need for national broadcasting coverage was critical and radio offered the quickest return on investment.

"A government which cannot communicate effectively with the

people who elected it must inevitably run the risk of being accused of remoteness," Dr Masire warned.

The President said despite government's best efforts, transport and telecommunications deficiencies still exist and radio broadcasting in Botswana carries a heavy burden of responsibility in regard to this problem.

Radio Botswana, he said, has acquired enough transmitters of sufficient power to ensure a flexible shortwave service to all areas.

"There is even spare transmitting capacity so that when occasionally faults do occur, the service can continue almost without interruption while the problem is being fixed," Dr Masire assured those at the ceremony.

Earlier, President Masire related how Radio Botswana's signal had been poor in many parts of the country when he commissioned a 50 kw shortwave transmitter, dubbed "The big one," on November 3, last year.

He said by then, Government's plans, as outlined in National Development Plan V, were to dramatically improve the situation.

Last year's ceremony, the President said, was not complete because "we have come here today to finish the job... with

three more transmitters, also 50 kw each.

"Those three transmitters have now been put in and for the first time Government can say with confidence that the national radio station has complete country-wide coverage at all times of the day and night," Dr Masire proudly said.

He said over the past few weeks, the new transmitters have been on the air with their powerful signals whilst tests have been carried out and that he has been assured that things have really improved from Kasane to Tshabong and from Selebi-Phikwe to Ghanzi, but that there is still some "fine tuning" to be done.

In another dramatic announcement, President Masire told those gathered that government plans to introduce a second commercial radio channel.

In the pipeline, for the future, Dr Masire outlined further improvements in broadcasting as.

CSO: 5500/58

BURUNDI

BRIEFS

FRENCH AID FOR TELEVISION--A few days from the Franco-African summit, Burundi has its own television created thanks to French aid, in accordance with the promise made by Francois Mitterrand in Bujumbura in October 1982. [Text] [Paris International Service in French 2125 GMT 1 Dec 84 LD]

CSO: 5500/42

FRENCH OFFICIAL ON TELECOMMUNICATION PROJECTS

AB112310 Yaounde Domestic Service in French 1200 GMT 11 Dec 84

[Text] President Paul Biya this morning received Louis Mexandeau, French minister delegate to the minister of foreign trade and industrial redeployment for posts and telecommunications, at the Unity Palace. Their discussions centered on cooperation between France and Cameroon in the field of telecommunications and television. After the audience, Mr Mexandeau talked to Therese Francine Mbami about the outcome of their discussions:

[Begin recording] [Mexandeau] We dwelt at length on cooperation between Cameroon and France because of the bonds of friendship that unite our two countries and also because of Cameroon's desire to strengthen its cohesion and to develop its economy. It happens that the sector of which I am in charge in France — telecommunications and television — are sectors that have promising futures in terms of the economic development of the country.

[Mbami] Your Excellency, from the working sessions you held with authorities at the Ministry of Posts and Telecommunications, equipment you have here is French made, and the need for more of this is increasing everyday because of the expansion of the country's economy. The choice was made by the head of state and, as far as television is concerned, we discussed a certain number of projects that are going to be undertaken. The decision has already been made, and the contract for the transmitting tower has been awarded to a French firm.

Concerning telecommunications, we are discussing space transmission by an earth station. Discussions are at an advanced stage on this. There are also those projects on extensions to telephone exchanges, which are either under construction or will soon be constructed. It seems that because of the great demand, the government is thinking of making massive telephone line installations in big cities like Yaounde and Douala. [end recording]

It should be remembered that Mr Mexandeau has been visiting Cameroon since 8 December 1984. He arrived in Yaounde last night. He was welcomed in Douala last Saturday by his Cameroonian counterpart, Felix Tonye Mbog. On Sunday, the French minister visited Mount Cameroon and visited posts and telecommunications establishments in Douala yesterday morning.

The two delegations held a working session during which the Ministry of Posts and Telecommunications presented its projects for the Littoral Province. They concern: extension works on the space and underground networks of Douala, Ebeya, and Nkongsamba; the extension of the telephone exchange of Ebea; the Douala television transmission network project; the (Depanda) telecommunication center; the Dome transmission station; the Oti station; the renovation of electrical equipment and the problem of spare parts.

Mr Mxandeau is scheduled this afternoon to visit the National Advanced School of Posts and Telecommunications. He will make an inspection tour of Posts and Telecommunications establishments in the city of Yaounde, particularly the telephone exchange station, the (Damengo) earth station, and the (Mbankolo) television station. An important working station is scheduled for tomorrow afternoon.

CSO: 5500/50

GUINEA-BISSAU

BRIEFS

ALGERIAN AID FOR TELECOMMUNICATIONS--The Algerian Ministry of Posts and Telecommunications had announced through its representative at the round table held in Lisbon last May by our government and its main economic partners that it is willing to contribute 200,000 dollars to the project designed to expand the telephone network in several regions of our country. Said project is within the framework of the Economic and Social Development Plan for the 1983-1986 period. It is within this framework that a government delegation has been in Bissau since last Monday for the purpose of studying certain questions connected with the project with Guinean authorities of the Ministry of Information and Telecommunications. [Text] [Bissau NO PINTCHA in Portuguese 28 Nov 84 p 3] 8089

FRANCE TO INSTALL SATELLITE STATION--Comrade Mussa Djassi, minister of Information and Telecommunications, begins today, Saturday, his visits to France and Belgium (European Economic Community). With French Government he will study, among other matters, questions related to bilateral cooperation in the area of telecommunications, the progress of the studies regarding the installation in Bra of a ground station that will link our country with the rest of the world by satellite. According to Comrade Mussa Djassi, the complete study of this project, that will cost approximately 600,000 French francs, is due to be ready in January of next year. In turn, it is anticipated that the installation involved in the project, which is budgeted in the amount of 35 million French francs, will begin in the early part of 1985, since it must be ready for operation during the last semester of 1986. Both the study and the completion of the project are the responsibility of the French Government. On the other hand, the minister indicated that the EEC and other financial organizations are likewise interested in footing the costs of only the study concerned with satellite communications for our continent. In further remarks to NO PINTCHA, Comrade Moussa Djassi added: "Guinea-Bissau has already expressed its favorable opinion, thus opening the way for its inclusion in the aforesaid project." [Text] [Bissau NO PINTCHA in Portuguese 6 Oct 84 p 3] 8089

CSO: 5500/45

EXTERNAL TELEX PLAN ABANDONED FOR LACK OF IMPORT LICENSE

Kaduna NEW NIGERIAN in English 16 Nov 84 p 8

[Text]

INSTALLATION of a telex exchange at the Kaduna complex of the Nigerian External Telecommunication Limited (NET), which would enable telephone subscribers in the north to be linked directly, is facing another hitch.

Sources at NET head office in Lagos told the New Nigerian last week that work was abandoned on the project because the Ministry of Commerce was yet to issue import licence for the equipment required for the installation.

According to an official source, "the money is now available in Naira, but we cannot open a letter of credit unless we have import licence from the Ministry of Commerce."

The New Nigerian learnt that the Supreme Military Council had, in a letter, authorised the Minister of Commerce to issue an import licence for the telex equipment.

Installation of the telex had been delayed because of the inability of NET to pay the company which would supply the equipment 1.4 million Naira.

Efforts to get any official of the Ministry of Commerce to comment on the issue failed.

It was reliably learnt that the delay in the installation of the equipment was costing NET a large amount of money in revenue and a lot of inconvenience to telex subscribers in the northern part of the country whom the exchange was supposed to serve.

Subscribers in the northern part of the country have no direct telex link with the outside world.

According to NET officials, subscribers had to be linked with NET in Lagos first from where messages were carried by satellite to their destinations.

CSO: 5500/48

GOVERNMENT, SABC CLASH OVER TV CONTROL REPORTED

Johannesburg SUNDAY EXPRESS in English 2 Dec 84 pp 1, 2

[Article by Kitt Katzin: "Pik in Amazing Row With SABC"]

[Text] An amazing clash has developed between the government and its most faithful propaganda ally--the SABC--over control of television.

The clash broke into the open this week when the Minister of Foreign Affairs, Mr Pik Botha, stunned SABC staff by announcing a new independent TV channel that would compete with the SABC.

Although the director-general of the SABC, Mr Riaan Eksteen, said he had known since September of the new channel, it is an open secret Auckland Park is bitterly opposed to the decision to break its monopoly on commercial TV.

The new service--to be transmitted to subscribers on a coded frequency--will offer top quality entertainment and leisure programmes, and is expected to be an instant money-spinner.

The government, which has been under strong pressure from Nationalist newspapers, sees the new service as a means of letting the newspaper industry share in television revenues while keeping them out of the broadcasting of politics and current affairs.

Welcomes

SABC sources say that while the corporation welcomes free competition, it believes the proposed service is an unnecessary duplication of channels--and poses a serious threat to the corporation's own new commercial venture, TV4, due to be transmitted in February.

The two channels, similar in content, will clash head on. The SABC, instead of cashing in with TV4, will now have to share the revenue spoils with an independent channel set up by its own master--the government.

At Auckland Park this week SABC personnel were stunned by Mr Botha's announcement and claimed that apart from Mr Eksteen and the management committee, nobody knew of the plan until it was announced on Tuesday.

Mr Eksteen, in a statement on Friday, said the SABC management had known in September of plans to set up the new channel--although government sources in Pretoria said investigations had been going on for several months.

"It came as a complete surprise," said one informed SABC source. He described the reaction of staff as one of "embarrassment and anger."

Commenting on the effect of the new service on TV4 and existing channels, SABC sources admitted that while the corporation had a monopoly of the air-waves, and by far the biggest share (36 percent) in the media advertising revenue pool, it too was feeling the economic pinch.

They said TV4, from which the SABC hoped to earn an extra R40-million, was a vital project in terms of generating fresh cash reserves, especially since the SABC could allocate only 8 percent of TV broadcasting time to advertising, and because the maximum number of viewers was already levelling off.

In the circumstances, said SABC sources, the government-inspired TV subscription service was inappropriately timed. They questioned the motives behind the announcement.

#### Struggling

While, significantly, Auckland Park's official reaction is a stolid "no comment," sources believe the government's go-ahead was given not so much to encourage financially struggling Press groups, as a whole, to share in the advertising revenue cake, but to protect the dwindling reserves of the publishing houses supported by the National Party.

It is well known that Nasionale Pers--whose three dailies, Die Burger, Beeld and Die Volksblad, are NP mouthpieces, and of which the State President, Mr P. W. Botha, and three leading Cabinet Ministers were once directors--has been gunning for a portion of the SABC's advertising revenue slice for some time.

In an editorial last week, another Nationalist paper, Rapport, seriously criticised the formation of TV4.

It said that if the new service earned the SABC an estimated R40-million to R50-million, its share in the advertising revenue cake would increase from 36 percent to 40 percent, which, in the circumstances, was unfair.

But SABC sources believe that even though the government has spent several months investigating the possibility of an independent channel, there were two reasons why it decided, at this point, to go ahead.

One was that it would use the opportunity to gain credibility--internally and internationally--by shedding itself of its TV monopoly image.

The other was to curry favour with the Press groups, particularly those supporting the National Party, by offering them a counter to TV4 and a

chance of winning back at least some of the additional advertising revenue they would stand to lose as a result.

The government, the sources believe, was embarrassed by the announcement that the SABC was starting a fourth channel. It came only a few days after Mr Louis Nel, the Deputy Minister of Foreign Affairs, turned down a petition to lift the restriction on Bop-TV--on the grounds that this would threaten the advertising revenue of newspapers.

But then, just as the newspapers breathed a sigh of relief, the SABC confirmed TV4 was on the way--and signalled that it was ready to snap up, at the newspapers' expense, the revenue that may have gone Bop-TV's way.

This was seen by observers, and not least by the Nationalist Press, as a repudiation by the SABC of Mr Nel's decision to "protect" the Press groups on the Bop-TV issue--and another row erupted over the SABC's commercial TV monopoly.

"There was egg on the government's face," said one SABC source, "and it was clear that it would have to do something to win back the favour of the Press groups."

So what did it do?

Out of the blue, and in a move described as a "surprise" by at least one Nationalist newspaper, Die Vaderland, it announced it had opened the way for Press groups and private enterprise to invest in a new independent service.

This showed, said observers, that a rift had developed between the government and the SABC.

Die Vaderland said the government had been repudiated over the Bop-TV issue, and added that there appeared to be a severe lack of planning and consultation between the SABC and the government.

The SABC, said informed sources, had also had enough of the Bop-TV spillage issue and was bitter at being pushed by the government into transmitting the service on behalf of Bophuthatswana.

Meanwhile, the Nationalist Press has also questioned the government's sudden decision to break SABC's monopoly.

Die Vaderland, saying that this too was "surprising," recalled that until recently it was generally held that the government was insistent that no independent channel would be introduced without the SABC having the final say.

It was not clear, said Die Vaderland, when and why the government had apparently decided to deviate from this policy.

The answer by informed government sources in Pretoria was that the government had decided as a priority to rid itself of its "negative" TV monopoly image in the hopes that this would help to improve its own image--at home and internationally.

It would also enable the SABC to develop an independent image of its own and move away from its reputation as an official government mouthpiece.

In addition, an independent service run by private enterprise would mean a new tax bonanza for the government, as opposed to the SABC operating it "in house" and taking a cut of the profits.

Asked why the government had shown a sudden change of heart towards the lot of newspapers, one source said: "The interests of the country are best served by a free and independent Press. We know the SABC is taking the major share of the advertising cake, and it is not in the national interest for newspapers to fold."

CSO: 5500/46

## ITV RAISES HOPES OF AERIAL SUPPLIERS

Johannesburg SUNDAY TIMES in English 2 Dec 84 p 9

[Article by Ciaran Ryan]

[Text]

**TELEVISION** and aerial companies are licking their lips at the prospect of an independent TV channel.

The Bop aerial business is endangered by the SABC's intention to wipe out what remains of Bop TV spillage.

Independent TV will probably transmit a coded signal on the normal UHF frequency and TV sets will require a decoder to display it. This method is extensively used in the United States.

### Legal

Shlomo Leibovich, manager of D&M TV in Johannesburg, says: "The question is a legal one. Will the television station allow private firms to supply the decoding boxes or will they keep all the business for themselves? If they allow private firms to install decoders it will be good news for us. If not, you could see a pirate market developing such as happened with video tapes."

John Zuccaroli, managing director of Early Bird Services, says: "We will wait to see what the channel's technical format is. It could mean big business and it will be nationwide, unlike Bop TV."

Speculation is rife as to style and programme content of the new channel.

It is not known whether viewers will pay rent for decoders or for each programme selected. They would be billed at the end of the month.

### Whizz-kids

It is uncertain what system of transmission will be used, but nearly all methods are fraught with difficulties. Technical whizz-kids in the United States have discovered the workings of the decoder and obtained rent-free viewing.

If the cost of viewing is high it is not hard to imagine the growth of a pirate industry specialising in coder bypass systems.

News of the formation of a study group to look into independent TV came barely two weeks after the SABC announced a fourth channel.

Mr Leibovich says the SABC has killed a thriving Bop aerial market:

"We deal mostly with communal installations, in blocks of flats and hotels, and four months ago we installed five or six aerials a day. Now we are lucky to have two a week."

"We are still getting some inquiries, but there is no business flowing from these. People are scared that the SABC will cut the signal again."

### Fraction

Mr Zuccaroli says Bop aerials accounted for only a fraction of its business as it concentrates on repair services throughout South Africa.

"We avoided the Bop aerial market because we were uncertain whether the SABC would cut the signal further.

It is disappointing for a customer who has paid out R600 for an installation to find one day that he can no longer receive a signal."

The installation of Bop TV aerials became an overnight boom industry after transmission began in 1983. It became highly lucrative when the SABC began reducing spillage.

The cost of installing aerials rose as the signal weakened and this kindled the interest of numerous television companies as more sophisticated equipment was needed. The weaker the signal the better the business proposition it seemed.

### Faint

Some companies claimed that even a faint signal could be picked up in many areas by stacking as many as eight aerials on one mast. Entertainment-starved viewers on the Reef found a snowy Bop TV picture preferable to a crystal-clear SABC.

Depending on how many "stacks" were required the cost varied from R100 to R600 for a private installation and from R400 to R1 200 for a communal aerial.

DETAILS ON NEW PAY TV SERVICE GIVEN

Billing Plan

Johannesburg SUNDAY TIMES in English 2 Dec 84 p 5

[Article by Neil Hooper]

[Text]

**SOUTH AFRICA'S new "pay TV" service will transmit the best movies and entertainment shows on a "look-now-pay-later" basis.**

From the comfort of their armchairs at home, viewers will be able to select programmes from a directory, tune in — and be billed at the end of the month.

The independent subscription television service, announced this week by the Minister of Foreign Affairs, Mr Pik Botha, is likely to be highly profitable even though it is virtually certain that it will carry no advertisements.

According to a government source, the new service is aimed at compensating newspaper publishing houses for advertising they have already lost to SATV and for the further loss of revenue they will suffer when TV4 is introduced.

The income of the new service will be derived from subscriber fees.

If just a third of South Africa's 1.5-million set owners become subscribers at, say, R35 a month, income could run to more than R200-million a year.

Additional charges for individual "supershows" could bring in even more.

Newspaper executives have welcomed the announcement of a subscription service, saying that it did not matter so much how its income was derived so long as newspapers "can get relief from the ravages of television", as one put it.

Mr Clive Kinsley, managing director of South African Associated Newspapers, said: "Obviously we need further information of what the Government has in mind and await this with considerable interest."

Mr Hal Miller, the managing director of the Argus Printing and Publishing Company, welcomed the new service but said he did not want to comment until further details were available.

First news about a "pay-as-you-view" service appeared in the Sunday Times on June 16.

**Guidelines**

While the final dimensions of the service will be announced only after the Government has studied the report and recommendations of a specially-appointed "task group", some guidelines have been established.

These are believed to include the following:

- No advertisements will be carried as this would hurt the newspaper industry even more and divert revenues from the SABC as well.

- Instead, the new entertainment service will be operated, probably on contract by a company controlled by a consortium of South African-only newspaper groups and other interested bodies.

- Only entertainment and no news or actuality programmes will be screened. A decision has not been taken on sport coverage.

- The only involvement of the SABC will be — if required — to act as an agent for a fee, to provide transmission and other technical facilities.

- Since distribution via a cable network is considered impractical in South Africa, programmes will probably be transmitted on a microwave UHF multi-channel.

- Programmes will be provided on credit to subscribers, who will then be billed for them regularly. The service will be discontinued to subscribers who fail to pay.

The SABC has confirmed that it is investigating the microwave system of transmission which, apart from having the capacity and accuracy of the cable system, has additional capacity which can be used for telephone, telex and two-way TV communication.

Subscribing viewers will have to install special "coder-units" in their sets, as well as special UHF aerials.

## Advantage

The advantage of a microwave multi-channel service is

that, with "coder units", the transmitter can code any set connected to the system either to receive or not to receive a programme at any particular time.

It is possible to code 100 000 sets in 20 minutes.

At the end of a specific viewing period, the amount owing would appear on the screen, and if not paid in time, the set would again be coded to halt further transmissions.

Cinemas as well as small video outlets could be hit by the new service.

## The Task Force To Write Rules for New Service

THE former Deputy President of the Council for Scientific and Industrial Research, Dr F J Hewitt, has been appointed chairman of a work group to investigate the introduction of subscription television.

The Minister of Foreign Affairs, Mr Pik Botha, announced the appointment yesterday.

The six other members of

the task force are: Mr P H van Tonder, Director, Transmission, and Mr B Dicks, Director, Telecommunication-Commercial, both of the Department of Communication and Public Works.

Mr J Rautenbach, legal advisor in the Department of Foreign Affairs, and Mr J de Klerk, also of Mr Pik Botha's

department, who will be the secretary.

Dr D van Vuuren, of the Communications Institute at the Human Sciences Research Council and Professor A de Beer, head of the Communications Department at the University of the Orange Free State.

Mr Botha said the work

group's brief is to make recommendations concerning the basis on which contracts will be granted, the methods of transmission, the nature of programmes, transmission hours and cost factors, amendments, if necessary, to existing legislation and transmission conditions to which subscription television will be subject. — Sapa.

## Issues Involved

Johannesburg THE STAR REVIEW in English 1 Dec 84 pp 1, 2

[Article by Janine Walker]

[Text] This week the Government made the surprise announcement that it would be setting up a working group to investigate the establishment of an independent "subscription" television station. Janine Walker, THE STAR's TV Editor, looks at the issues involved.

SOUTH African TV viewers, starved of choice for so long, are about to have more television than anyone could possibly handle in one night.

From the late beginning of TV in South Africa in 1976 with one solitary channel broadcasting four hours a night, the near future appears to offer:

- TV1 from 4 pm to midnight.
- TV2 and TV3 from 6 pm to 9.30 pm, later on weekends.
- TV4 (on the TV2/TV3 channels) from 9.30 pm to midnight.
- TV5 via cable or some subscription service.
- Bop-TV from 5.30 pm to about 11 pm.

TV1 will continue screening its broad mixture of programmes — from light entertainment through

to educational, sport, magazines, talk shows and music programmes.

It is believed that TV2 and TV3 are also going to keep their mix of programmes with the usual emphasis on sport, drama and music programmes.

The fourth SABC channel has been on the cards since the inception of TV2 and TV3. When first mooted it was believed that this channel would concentrate more widely on educational television as well as screening a number of documentaries and magazine programmes. It was believed a new channel would operate on the lines of BBC2, offering the "heavy" side of television and allowing TV1 to concentrate on light entertainment.

However, the whole Bop "spillage" uproar and the video hire boom has shown both the SABC and

the Government that South African viewers are desperate for so-called "pop TV" — a station which screens predominantly light entertainment programmes.

Observers have noted that this obviously had a great effect on the SABC who immediately have included more overseas popular entertainment shows in the TV1 line-up. Just months after Bop hit the airwaves TV1 announced a line-up of imported and local drama series for virtually every night of the week as opposed to its usual practice of screening one major overseas drama — "Dallas", for instance — and one local series, such as "1922".

The corporation, often slammed for not giving viewers what they want to see, two weeks ago announced a fourth service would be introduced early next year on the TV2/3 channels when their regular transmissions closed at 9.30 pm and that TV4 would consist mainly of entertainment and sport programmes.

An interesting aspect of the announcement was that SABC said at the time that TV4 would not be run on the strict 50/50 English-Afrikaans language lines as is TV1, but that programmes would be screened possibly in their original language (presumably English in the case of sport).

This week the Government made the surprise announcement that it would be setting up a working group to investigate the establishment of an independent "subscription" TV station.

This working group will consist of experts from the Department of Foreign Affairs and Communications and the Department of Public Works as well experts from the TV field.

However, no one is saying whether members of the private sector or of the country's major Press groups will be represented in this study group, although it is commonly accepted that in order to ensure the survival of newspapers it is essential that the printed media participate in any new TV channel.

It was also announced that the new service would not be controlled by the SABC and would broadcast only entertainment and recreational programmes which the Government considered desirable and in the public interest.

However, vitally important questions about the new independent station are still to be answered.

It is not yet known whether the proposed channel will be financed only by subscriptions or whether it will carry commercials in the same way as TV1, TV2 and TV3.

If the response by subscriptions is sufficient it will not be necessary to make the new channel a commercial one.

However, if it is a commercial channel and with TV4 about to hit the airwaves next year, TV's slice of the advertising cake will grow considerably at the cost of the printed media and could spell doom for a number of publications.

However, rumours about the new station abound.

There is speculation that the large publishing companies, Perskor, Argus, SAAN and Nasionale Pers, will be invited to participate in this new channel.

A recent report urged the Government to take part in a venture with the private sector.

There is also speculation from a number of quarters that Sun International is a major force behind the move for an independent station. The group has recently made large inroads into the entertainment industry following a merger between one of the companies in Sol Kerzner's group and Video Gems.

While the move towards an independent television station has generally been welcomed, a number of interested parties have raised certain misgivings.

A spokesman for the organisers of the Bop-TV petition said they hoped the introduction of a so-called independent station would not give the Government the excuse it needed to further cut Bop spillage in certain "white" areas.

"This new station would provide the ideal cover-up," he said.

"The Government's previous efforts to stop Bop spillage raised an enormous outcry. And they would be hard-pressed to explain and to justify the expenditure of microwave links and processors which would block the signal in white areas.

"However, by installing this new subscription channel, they now have the means to cut off Bop. While installing this new service on coded frequency, they could use the same technical expertise to cut off Bop-TV and loose the expenditure on the new channel.

"And when anyone complains, there will be the answer that all South Africans have access to an independent station."

Another misgiving which was raised was the question of an "independent" station.

"And this is vitally important. The station could be independent of the SABC but that does not necessarily mean it will be independent of Governmental control. It all depends on just who will be allowed to invest in the station."

"We welcome the move but obviously at present we have a number of reservations. We will

however, be monitoring further developments very carefully."

This feeling is echoed by a number of interested parties who, at present, are very cautious about the whole plan.

Whatever permutation the Government settles on for TV4 and the proposed cable/subscription service viewers can only gain.

That "white" viewer complaint that "we have no choice and black viewers have four channels" will soon have a hollow ring. With TV1, TV4 and the independent channel on stream, cry might soon go up: "We need another television set".

#### Cartoon View

Johannesburg SUNDAY TIMES in English 2 Dec 84 p 26

### Punchline



CSO: 5500/46

## ELECTRONICS, TELECOMMUNICATIONS BOOM FORECAST

Johannesburg SUNDAY TIMES in English 2 Dec 84 p 22

[Text]

**SOUTH AFRICA'S** electronics and communications industry is booming.

Total sales of equipment systems and components traded in the country are now worth an estimated R3 000-million a year, making the industry almost as big as the motor vehicle business.

The telecommunications sector is perhaps the fastest growing sector of the electronics industry, with sales exceeding the R800-million a year mark.

The computer sector has hardware sales topping the R700-million mark, while the electronic component sector is valued at nearly R300-million a year.

The remainder of the industry's turnover is made up of electronic systems and consumer electronics.

And if the turnover of the power electrical market is added on, the total value of the industry comes close to R4 000-million.

The South African-owned Altron group employs more than 10 000 workers, who are committed to making living more comfortable and meaningful for millions of people both inside and outside the country, according to a group spokesman.

"This tangible human contribution has formed the basis of our performance to date, and is our strength for the future," says the spokesman.

Siemens employs around 300 000 electronics workers worldwide, of which 8 000 are based in South Africa. The company invests an estimated R2,5-million each working day in research and development worldwide.

The prospective newcomer to the industry might well ask — but just what does

a career in the electronics field entail?

### All grades

The opportunities range from operators through to sales engineers, electrical engineering, technicians and graduates.

Non-graduate opportunities for suitably-qualified school leavers may be offered careers in the sales, systems, development, equipment, process quality and industrial engineering fields.

The tasks of incumbents are highly specialised for each field, and require extensive training either at plant or university level.

Development engineers, who are involved in conceptual planning of new communication systems, detailed circuit designs, and the application of microprocessor technology to provide modern solutions, can either embark on a graduate programme or receive training from the company, and continue with university training at a later date.

In the computer field, for example, Altech offers positions for analyst programmers, systems analysts, data base administrators, and, on the lighter side, despatch clerks, data entry operators, punch room supervisors and general administration functions.

With rapid advancement of electronic technology, research and development opportunities are integrated into the company's functions.

### Plentiful

Altech, for example, believes that much of its success has been the result of the full backing of its research and development efforts.

Career opportunities in this field are therefore plentiful.

One of the most serious problems hampering the industry's further healthy growth is the shortage of skilled technical personnel.

Says Altech's Mr Grant Rogerson: "It is a problem not unique to South Africa, but one which is prevalent in the industry throughout the world."

This severe shortage of skills has been spelt out in a number of surveys.

One of the surveys has shown that, taking into account the growth of the industry, said to be in the region of 25 percent to 30 percent a year, it is estimated that one electronics engineer and 10 technicians account for something like R750 000 worth of equipment.

In addition, experts have worked out that the industry needs about 500 electronics engineers as well as 5 000 technicians annually to meet its requirements.

Mr Rogerson estimates that not even a third of this requirement will be met this year.

And the shortage does not stem from a lack of remuneration or fringe benefits.

Rewards offered by the industry are generally regarded as above average when

compared with other manufacturing industries. Rather, the shortage has been chiefly brought about by the non-availability of skilled labour.

Also, electronics and telecommunications technology has made more dramatic strides in the past twenty years than in most other fields, bringing with it a wide variety of challenging careers to prospective technicians and engineers.

## Training

Most companies offer widespread training programmes for learner technicians, as well as generous bursary schemes for prospective engineers.

In addition to various degrees currently offered by almost all universities in the country, a number of apprenticeships, or the commonly-known sandwich schemes, are offered by technikons in conjunction with private industry.

Technician trainees are treated as employees by most companies.

They receive a salary and normal employment benefits both while they are at the technikon and during their in-company practical training.

CSO: 5500/46

TV1 MARKS DRAMATIC VIEWERSHIP INCREASE

Johannesburg RAND DAILY MAIL in English 6 Dec 84 p 4

[Article by J Manuel Correia]

[Text]

TV1 registered a dramatic overall increase in viewership in the third quarter of this year.

On weekdays it had 5 451 000 of all races, on Saturdays 5 452 000 and on Sundays 4 375 000, according to the latest All Media and Products survey.

Bop TV increased its black viewership dramatically but lost white viewers on Sundays, and did not gain any significant number of whites on weekdays and Saturdays. The station with the leopard logo had 429 000 viewers on weekdays, 351 000 on Saturdays and 386 000 on Sundays.

Here is the full breakdown of viewership figures (last quarter in brackets):

TV1, Mondays to Fridays: Whites 2 850 000 (2 656 000), coloureds 985 000 (821 000), Asians 415 000 (373 000) and blacks 1 201 00 (871 000).

TV1, Saturdays: Whites 2 876 000 (2 812 000), coloureds 982 000 (836 000), Asians 396 000 (407 000) and blacks 1 198 000 (1 037 000).

TV1, Sundays: Whites

2 413 000 (2 251 000), coloureds 785 000 (665 000), Asians 274 000 (270 000) and blacks 903 000 (686 000).

TV2 and TV3, Mondays to Fridays: Blacks 2 103 000 (1 511 000), Asians 47 000 (59 000), coloureds 87 000 (71 000) and whites 50 000 (67 000).

TV2 and TV3, Saturdays: Blacks 2 337 000 (1 684 000), Asians 46 000 (37 000), coloureds 80 000 (59 000) and whites 101 000 (68 000).

TV2 and TV3, Sundays: Blacks 1 881 000 (1 502 000), Asians 30 000 (33 000), coloureds 50 000 (90 000) and whites 30 000 (35 000).

Bop TV, Mondays to Fridays: Blacks 275 000 (165 000), Asians 27 000 (28 000), coloureds 44 000 (42 000) and whites 83 000 (81 000).

Bop TV, Saturdays: Blacks 224 000 (166 000), Asians 25 000 (20 000), coloureds 36 000 (43 000) and whites 66 000 (65 000).

Bop TV, Sundays: Blacks 255 000 (143 000), Asians 20 000 (20 000), coloureds 38 000 (42 000) and whites 73 000 (76 000).

CSO: 5500/52

'RADIO 5' LOSES LISTENERS

Johannesburg RAND DAILY MAIL in English 6 Dec 84 p 4

[Text]

STEREO or no stereo, Radio 5 is rapidly shedding listeners.

To some observers, it seems like the national station is dying — even Radio Highveld put up a better performance than Radio 5.

Meanwhile, Channel 702 increased its listenership, which poses the question: Did the SABC waste its money by making only Radio 5 a stereo station?

The only station that continues to show a consistent increase in listeners is Springbok Radio.

This emerges from the All Media and Products Survey (AMPS), for the third quarter of the year.

These are the figures for the main radio stations for this period, with the second quarter in brackets:

● Springbok — weekdays, whites, coloureds and Asians: 1 852 000 (1 741 000);

Saturdays 1 535 000 (1 375 000); and Sundays 1 246 000 (1 241 000). The station also increased its white listeners for every day of the week.

● Radio 5, weekdays, whites, coloureds and Asians: 283 000 (314 000); Saturdays 260 000 (295 000); and Sundays 232 000 (278 000). The station shed a large number of white listeners every day.

● Channel 702, weekdays, whites, coloureds and Asians: 440 000 (382 000); Saturdays 372 000 (304 000); and Sundays 322 000 (277 000). The station gained enormously on white listeners, especially on weekdays. Its weekday white listenership was 408 000 compared to Radio 5's 185 000, its Saturday white listenership was 343 000 compared to Radio 5's 155 000, and 295 000 against Radio 5's 145 000.

CSO: 5500/52

BRIEFS

TV BROADCASTING--The South African Broadcasting Corporation Board [SABC] has confirmed that TV2 and TV3 transmitters will be used to broadcast TV4 after 2130 at night from March next year. The new service will consist mainly of entertainment and sports programs. The board has also decided to expand the TV2 and TV3 transmitter networks as soon as possible. The board said it had taken the decision against the background of specific requirements which it was aware of. The decision meant that the SABC would deliver a further service to a large percentage of all South Africa's inhabitants. [Text] [Johannesburg Television Service in English 1600 GMT 5 Dec 84]

SABC BOARD MEMBERS ANNOUNCED--The South African Broadcasting Corporation Board for 1985-1986 has been announced in Pretoria by the minister of foreign affairs, Mr Pik Botha. The members of the board, who will take up their posts on 1 January 1985, are: Mrs (Mimmie Ackerman), Mimmie Coertze, Mr (G.D. Bornman), Mr (D.C. de Villiers), Miss (Riva Forman), Dr (R.N. Gugushi), Mr Chick Henderson, Dr (S. Pere), Dr (F.J.L. Quent), Prof (V. G. Ranchod), Mr (W.M. Ross), Prof (S.J. Terblanche), Dr (C.J. van Wyk), and General (J.A. van Zyl). The present chairman of the board, Prof Wynand Mouton, has indicated that he cannot occupy the position for an indefinite period, because of his duties as rector of the University of the Orange Free State, but he has offered to continue for a bridging period. [Text] [Johannesburg Domestic Service in English 0500 GMT 6 Dec 84]

CSO: 5500/47

## BRIEFS

TV'S, RADIOS FROM GDR--Uganda and the GDR have signed a protocol on development of mutual exchange of goods between the two countries. Under the protocol, the GDR will undertake to deliver to Uganda about 2 million portable radio sets and both governments will also consider the possibility of the importation of TV sets to Uganda. Competent authorities of both governments will enter into negotiations early next year with a view to conclude a contract for the purchase of the portable radios. The protocol was signed in Kampala by the minister of information and broadcasting, Dr David Anyoti, on behalf of the Uganda Government, while the director general, African desk in the East German Ministry of Foreign Trade, Mr Wolfgang (Bruchner), signed on behalf of his country. Mr Wolfgang (Bruchner) is currently leading a five-man East German goodwill delegation to Uganda. The signing of this protocol is based on the mutual cooperation, goodwill, and solidarity that is now being enjoyed by the Government of the Republic of Uganda and the Democratic Republic of Germany. [Text] [Kampala Domestic Service in English 1000 GMT 18 Dec 84 LD]

CSO: 5500/57

ZAMBIA

BRIEFS

SECOND EARTH STATION ANTENNA--ZAMBIA has made a major advance in the tele-communication field with the construction of a second earth station antenna. Unlike the existing Mwembeshi satellite station which works towards the Indian ocean, the second station to be constructed 200 metres away will work towards the Atlantic Ocean. A report submitted to a recent regional telecommunication conference says a technical feasibility study on the project had been completed but the project had yet to take off because of financial constraints. Underlining the need for the second antenna, the report says many countries working to the Atlantic Ocean would like to establish direct satellite communication services with Zambia. Some of these countries have been given services by routing via other countries. All American and West African countries, Angola, Mozambique and Zaire work to Atlantic region satellites. When Zambia constructs a second antenna some traffic on these routes can be off-loaded from Indian ocean region to Atlantic Ocean, hence providing diversity. [Text]  
[Harare THE FINANCIAL GAZETTE in English 7 Dec 84 p 5]

CSO: 5500/56

USSR

BRIEFS

ZELENOGRAD TELEPHONES--A number of new automatic telephone stations [ATS] appeared on the city map on the eve of 1984. One of them is in Zelenograd, with the code 536. Residents of microrayons 6 and 7 will have telephones prefixed by this code. New telephones, installed in Zelenograd residents' apartments today, will be put in service at the end of the month. The new ATS's are being included as a single system throughout Moscow. Installation of equipment for still another telephone station in Zelenograd--532--was begun recently. Residents of microrayons 8, 9, 10 and 12 will receive telephones with this code next year. Three ATS's are now operating in Zelenograd. With the commissioning of two more, the problem of telephone service within the limits of construction now in progress will be completely resolved. [Text] [Moscow VECHER-NYAYA MOSKVA in Russian 3 Feb 84 p 1] 8936

CSO: 5500/1007

NEW DIGITAL SERVICES: FIRST STEPS TOWARD NATIONAL ISDN

Paris MESSAGES DES PTT in French No 341 Nov 84 pp 6-10

[Article: "Integrated-Services Digital Network"]

[Text] To meet the increasing and diversified demand of business, the Telecommunications Administration is introducing the ISDN (integrated-services digital network). This operation is supported by the advanced digitization of the ground network and by the Telecom-1 satellite.

Companies are already being offered a new range of digital services, all of which are data-processing applications required to increase productivity: computer-aided design, consultations, meetings, transfers, etc.

Corporate telecommunication requirements are diversified: voice, images, data, blueprints, conferencing. The transmission throughputs required are increasingly varied but must remain simple to obtain. The answer of all telecommunication companies in industrialized countries is: ISDN (integrated-services digital network), a single network capable of carrying different services so as not to multiply the number of connections and terminals. In 1984, France started marketing a new line of digital services, the first step toward a national ISDN. Two assets account for its lead: the Telecom-1 satellite and the digitization of 50 percent of the ground network.

"The Telecommunications Administration must assess at all times the probable trend of users' demand so as to anticipate in due time what development and equipment investments will be required. Although we are operating in very high-technology fields, we must be wary of developing technology for the sake of technology, and we must keep tabs on demand and market trends," Jacques Dondoux, general director of the Telecommunications Administration explained at the SICOB [International Data-Processing, Communication and Office Organization Show] in October 1984, when he announced the opening of the ISDN.

## Business Communications

Today, telephone calls represent 90 percent of business telecommunications. But data-transmission between computing centers are increasing. In 1984, there were 20,000 connections to Transpac and 464 Transfix links (see following articles in the section "Day-to-Day Telecoms"), large figures to be compared with 100,000 telex subscribers and 26,000 telecopiers. However, the strongest growth is no longer between large computers or between large computers and passive terminals (consisting of only a screen and keyboard). Microcomputers are invading offices and laboratories. Their local processing power, their memory, their many applications require medium and high-throughput links: file exchanges, downloading and uploading, as well as accelerated consultation of databases (less frequent but faster than with Transpac). Within companies, networks already send voice and data on the same cables.

## The Language of Data Processing

In 1983, 60 percent of the large private telephone systems ordered were digital. It was the CNET (National Center for Telecommunications Studies) that started betting on digital systems in the 1960. This technique involves converting the signal analog curve into a series of 0 and 1 in time. Which is also the language used in data processing. In computers, characters travel and are stored as a sequence of 1 and 0: for instance, the electric current is on (1) or off (0). To represent the alphabet (upper and lower case) and figures, in other words a full typewriter keyboard, it takes 256 signs, i.e. 256 manners of arranging 0 and 1. Eight boxes will yield 256 possible combinations of 0 and 1: from 0000,0000 to 1111,1111.

The eight boxes form an eight-bit byte. Each box is called a bit (the English contraction of "binary digit"). Computers will store variable amounts of data, of eight-bit bytes. The number of bytes represents the power of a computer; it is like the horsepower of a car. In telecommunications, it is the throughput that counts: how many data (bits) are transmitted in one second.

## The Digital Effect

Digital coding was obvious for computers; it prevailed for economic and technological reasons. Actually, network digitization was made possible by the progress achieved on components. The digital transmission of voice on the telephone was accompanied by an increase in the possible data throughput of telephone links. It increased from 4.8 kbit/s to 64 kbit/s, i.e. a more than tenfold increase. For consumer electronics, the sound is now digitized in the form of compact discs. But television is also displaying digital pictures. The new credit titles of the Antenne-2 channel were developed by a computer. Image digitization is a major forthcoming development. It is of interest to business for production (computer-aided design), information, training (flight simulator, etc.).

Sounds, images, data are stored and travel in digital form within companies. But corporate headquarters, engineering departments and workshops are seldom in the same town. Factories and laboratories are distributed throughout the country: Saint-Gobain is manufacturing cardboard boxes in 30 different loca-

tions. Through subsidiaries and partnerships among groups, facilities become European. Renault and Volkswagen are manufacturing jointly a new automatic transmission. Airbus spare parts are made in many countries. Even internal company communications (80 percent of all cases) will use the Telecommunications Administration network.

#### Network Transparency

Transmissions and switching must be digitized. Each call must be digitized from one end to the other: there should be no return to analog transmission on some sections. A computer will not receive curves, but series of pulses. The fabric of the French network makes this possible: it is the most highly digitized network in the world. As far as switching is concerned, over 50 percent of transit exchanges and close to 45 percent of subscribers' equipment will use time-division switching already in 1985. As far as transmission is concerned, 60 percent of local links, even in towns, are already using digital systems. For toll communications, the accelerated installation of 140 megabit/s lines should make it possible to reach a 40-percent digitization rate by the end of 1985. This will ensure that all subscribers receive better service, and it will provide the ground infrastructure required for the new professional links collectively known as ISDN. For switching, for instance, all electronic time-division exchanges will make possible medium-throughput links (64 kbit/s) between computers, which are as flexible as links between individuals (same throughput). They no longer have to be set and frozen. They can be established one call at a time. Thus, it is possible, at high speed, to reach successively computers located in cities anywhere in the country.

The Telecom-1 satellite offers the same possibility for high throughputs. Between the subscriber company and the antenna directed to the sky, a black box contains a time-division multiple-access system. In other words, several subscribers are sharing the satellite as they would share a ground time-division switching system. National-scale synchronization prevents undesirable collisions between several communications from occurring at 36,000 km above the earth. Synchronization is carried out from a single station, in Mulhouse, the so-called reference station: it will give the green light only to one link at a time. As a comparison with automobile traffic: there are too many cars in Paris for all of them to travel at the same time at random. At the prefecture of police, a computer controls and synchronizes traffic lights so traffic will flow as smoothly as possible; similarly, the Mulhouse station controls data traffic through the satellite.

The satellite and the ground network are using the same language. They are working together. The subscriber calling from Paris to Marseilles does not know whether his voice will go through underground cables or radio-relay systems. Two computers writing to each other are just as unable to tell the difference. /The network becomes transparent./ [in boldface] What counts for the user is not to know what support is used for his call, but essentially what service is offered to him.

With high-throughput digital networks, a single terminal and a single connection will make it possible to obtain successively or simultaneously services

as varied as a telephone call, a rapid facsimile, an exchange of electronic mail, the transfer of a computer program, a fixed or slowly moving image.

### Self-Service

The satellite differs from the ground network only in that it offers additional facilities. Its geographical limits are those of Europe. Starting in early 1985, the Federal Republic of Germany will transmit and receive communications through seven stations on its territory. International ground links are harder to set up. Another advantage is that, instead of transmitting a message to a single correspondent, a single city, the satellite will broadcast to several regions, even several countries... A newsletter or a circular will have to be sent only once and for all instead of being sent once to each individual, as with the ground network. Finally, the service offers new flexibility: truck-mounted antennas can be placed in service by a few agents within a few hours.\*

But these characteristics are not all of interest to all businesses. Actually, it all depends on their needs. The new line of digital services can be divided into three. First, permanent links: this medium and high-throughput service (48 kbit/s to 2 Mbit/s) is called Transfix. Second, starting in the second half of 1985, the Transcom service will make it possible to switch the flow of digital data at 64 kbit/s. Third, the Transdyn service offers the widest choice, from low throughputs (2.4 kbit/s) to high throughputs (1,920 kbit/s) available part time, by reservation or a single call at a time. This highly flexible system enables each user to pay the minimum price while meeting his needs as closely as possible. Part-time service is the cheapest and is for regular users: for instance, every day for one hour. Reservation is for occasional use planned ahead of time. Service one call at a time corresponds to the traditional use pattern of the subscriber who wants to use the line whenever he has to but whose telephone (contrary to what is the case with Transfix) is not permanently disconnected so as to provide a link at all times, even when no call is being made.

### Cargo at Charter Prices

Tariffs reflect an appreciable price reduction per information unit transmitted (bit), i.e. per pulse. For instance, 64-kbit/s links are now sold for a bit price that is 4 times lower than the price of the same traffic through the analog telephone network. Another advantage is that the billing of services through the FCR (France Cables and Radio) subsidiary of the Telecommunications Administration enables companies to recover the value-added tax, as in the case of Transpac.

These prices make many applications quite accessible. These applications are not marketed either by the Telecommunications Administration or by its FCR subsidiary. They provide transport and nothing else. As a comparison: a holiday village will sell an American-Plan stay for a seminar in Brittany, but it will not sell the airplane ticket or rent the car. In this case, FCR is selling the ISDN ticket that makes it possible to transfer computer files,

\* See MESSAGES DES PTT No 339 p 31.

to send "electronic mailbags," but FCR will not sell the computers or software or screens that will receive the images.

At the SICOB, for instance, the FCR booth in the PTT [Post and Telecommunications Administration] pavillion, was host to a demonstrator of the private company Computervision, a specialist of CAD/CAM [computer-aided design and manufacturing]. Its software makes it possible to produce diagrams, two or three-dimensional drawings, volume computations, robot programming, etc. Visitors could watch a demonstration of the connection of a CAD/CAM system to the ISDN. A decentralized engineering service installed at the SICOB was connected via Telecom 1 to the central CAD/CAM system of Computervision in Bagnole. Saint-Gobain is contemplating such a system for its 30 factories of cardboard boxes. To meet a customer's demand, a factory looks up to see if the appropriate model or a similar model have already been made by one of the 29 other factories. If necessary, the diagram transmitted is altered immediately so that it is not necessary to start from scratch and wait for a paper printout. The productivity gain and competitiveness thus achieved are due to the alliance of CAD/CAM and the ISDN network. The sale of the former results in the use of the latter.

At another booth, NADIR [expansion unknown], a pilot project of the INRIA [National Institute for Data-Processing and Automation Research] and DGT [General Directorate of Telecommunications], was presenting a realization of the Syseca group (a data-processing service company): the broadcasting of black-and-white photographs for a press agency. That service could speed up the delivery of reports to newspapers, including pictures as well as captions. For instance, the Sygma agency is now broadcasting 300 photographs per day to 40 correspondents throughout the world.

Other demonstrations showed how the equivalent of 30 paperback books could be transmitted within one second. The CNET was presenting the SARDE project (a system for filing and retrieving technical documents in electronic form) used to consult image databases: weather maps, drawings, repair diagrams, etc. Less spectacular but just as useful: rapid facsimile (10 seconds instead of 2 minutes). Electronic mail is expected to develop greatly. Studies show that 80 percent of all professional communications are internal company communications. This is true of written messages and telephone calls as well as of meetings.

Opportunities for brief group communications are reduced because of the long travel they involve. Thanks to the ISDN, videoconference studios and, more generally, all types of audioconference studios enhanced with fixed-image and telewriting transmission systems will offer companies new possibilities for group communications at the least cost. The ISDN will make dialogue easier between individuals, between computers and individuals, and between computers. The first in the world to be able to take advantage of it will be the 300 companies located in France and which are expected to subscribe to the ISDN within the next few years. Their size is less important than their communications volumes. Research centers, for instance meteorology centers, have a lot of information to exchange among themselves. Small and medium-size firms will answer international invitations to tender.

## An International Future

The standards for connections to the ISDN comply with the most common international standards now in force. The investments, the "outlets," will not become obsolete for a long time. In addition, ISDN switching provides for external as well as internal communications. Companies are sure that the equipment bought in 1985 will pay for itself. All foreign technical magazines are talking about the ISDN in all languages: in English, it is the integrated-services digital network. Like the FRG, Switzerland, Belgium, Ireland and Italy are contemplating the creation of Telecom-1 stations.

But it is new and some want to think twice. Because only a few enterprises were targeted when the ISDN was introduced, the selection of FCR to market unknown products was justified. But FCR marketing engineers are working with the technical sales people of the regional and operational directorates of Telecommunications. They call jointly on potential clients to offer them the services (Transfix, Transcom or Transdyn) best adapted to each case. The people to be convinced are those at the local provincial plant or factory and also those at the Paris headquarters; therefore, the sales pitch must be the same in both places. Technical coordination is just as essential. The sales people should not promise to set up a link within one month if engineers cannot set it up before two months. Training seminars are offered to company managers to get them acquainted with the ISDN technology. The decision to connect to a network is no longer made by computer specialists alone, but also by accountants, managers, plant supervisors, researchers, in short all those working with microcomputers.

It will take a few more years of transition before all companies are connected to the ISDN. But the full digitization of the network in the 1990's is a well-established objective. It will be completed without changing cables in buildings. The progress and the consistence of the French network go hand in hand. From the first digital-transmission experiments of the 1960's, the efforts of the Telecommunications Administration have tended to integrate services. In the long run, this will also benefit all subscribers. The household entertainment microcomputer will then have access to the ISDN like any professional today.

9294

CSO: 8319/0502A

FRANCE

OVERVIEW OF FRENCH ACHIEVEMENTS IN DIGITAL DATA TRANSMISSION

Paris MESSAGES DES PTT in French No 341 Nov 84 pp 13-15

[Article: "Digital Knowhow"]

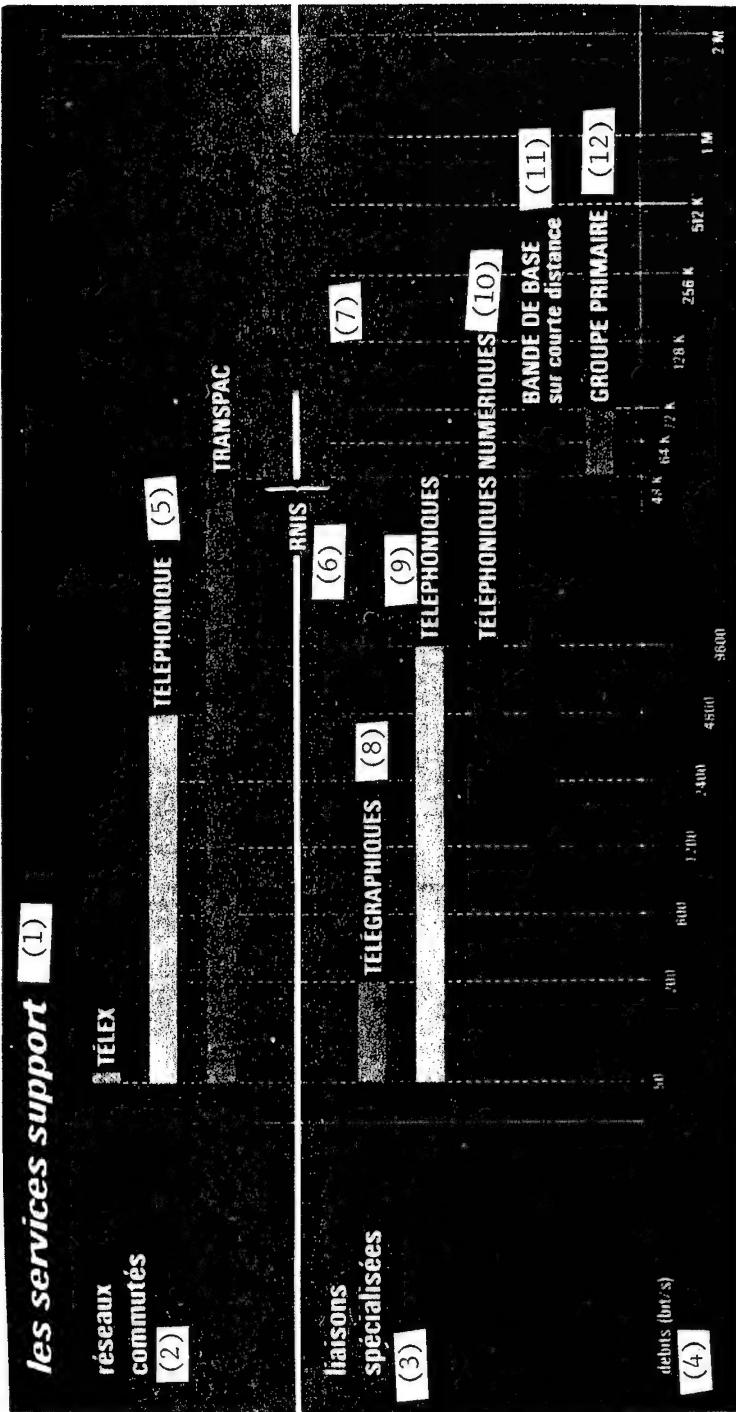
[Text] The Telecommunications Administration is now operating 418 high-throughput specialized digital links between corporate computers. These links, most of them inter-city links, are essential links in the remote-data-processing networks used by very large companies, in particular by companies in the tertiary sector (banks, service companies, etc.).

Since 1978, the Telecommunications Administration has made 110 access points available to computers avid for data, from Brest to Nice and from Strasbourg to Pau: these are "outlets" into which companies plug in their computing centers. It is safer and quicker to transmit data on line than to carry magnetic tapes by hand. Banks, for instance, which record their clients' debits and credits, intertwine movements from various origins and destinations. The Bordeaux hotel bill is debited to the Lyons account, and computers in both towns are transmitting this information to each other.

Certain computers are communicating around or nearly around the clock seven days a week. They need a line that will remain open at all times so they will not lose any time in making the connection. That is the case, for instance, of the computers that reserve seats at Air France agencies throughout the world, in all time zones. The cable starts at the company and goes almost straight to a node of the toll network. At the switching center, the link "goes around" the switch where it is established once and for all with a single correspondent through a fixed cable. Therefore, it just goes through the distribution frame (entry and exit lobby of the exchange). At the other hand, reaching the distant site in the same manner after using the transmission network, the link establishes a permanent digital communication support between two working places of the company. It is called "dedicated" for its constituents are inaccessible to other subscribers.

Commercial Credit

Companies are well aware of it. In 1984, the French Telecommunications Administration is the only one in the world to operate 418 inter-city links



### Data Transmission

The Telecommunications Administration is offering an extended line of remote data-processing services. Specialized digital links have been identified by the name of Transfix since the introduction of the ISDN.

Key:

1. Support services
2. Switched networks
3. Specialized links
4. Throughputs (bit/s)
5. Telephone
6. ISDN
7. Digital services, Telecom-1 line
8. Telegraph
9. Telephone
10. Digital telephone
11. Baseband over short distances
12. Primary group

at this throughput. Of these, 54 equal or exceed 128 kbit/s.\* To give an idea of the 128,000-bit/s throughput used for press facsimiles or computer-file transfer: this represents 16,000 characters transmitted in one second. As a comparison, a letter-size text page will contain only 3,000 characters. Some links have a throughput of 1,024 kbit/s; they connect high-power computers of the scientific type (for instance, the Cray). But most lines, 364 of them, are restricted to 48 kbit/s. Many computer terminals cannot operate faster. To avoid multiplying cables, the Telecommunications Administration is regrouping 48-kbit/s connections into 2-Mbit/s digital conduits, the basic links of the digital transmission network. This economy also enhances safety: if a failure occurs, an artery of the same type takes over. From the point of view of the company, a single 2-Mbit/s support can service several links, each of which is allocated to a terminal or an application. These are called "bundles."

These specialized digital links have experienced a very strong growth in the past five years, demonstrating that a commercial subsector really exists. Since the ISDN was introduced in France (see article on this network), this service has been known as "Transfix." The Telecommunications Administration is taking this opportunity to offer other options that should cause the number of user companies to increase. To make it easier to operate the service, Telecommunications Administration agents will use a new type of equipment. At the exchange distribution frame, connections will no longer be made by hand, by pulling cables. They will be programmed from a console... a computer console of course. The remote connection of Transfix, which is also remote-maintained and remote-monitored, is evidence of the digital expertise acquired by France.

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\* The data throughput unit on transmission lines is the bit per second (abbreviated as bit/s). The multiples used are: kilobit per second (1 kbit/s = 1,000 bit/s) and megabit per second (1 Mbit/s = 1,000,000 bit/s).

LABOR PARTY PAPER OPPOSES PRIVATIZATION OF TELECOMMUNICATIONS

Oslo ARBEIDERBLADET in Norwegian 31 Oct 84 p 4

[Editorial: "The Telecommunications Agency's Future"]

[Text] The Telecommunications Agency's future place in Norwegian society and industry is being spiritedly debated at the moment. On the assumption that the schedule will be maintained, the Storting is to take a final stand in the 1985 spring session on the organization of our national telecommunications concern. The government has announced the so-called "telematics report" around the turn of the year. The Stette Committee submitted its recommendation in the fall, and the round of hearings in light of the recommendation has been concluded. Statements which have come from various interest groups forebode an intense battle regarding the Telecommunications Agency's future place.

There are especially two items the battle will be about. Firstly, should the business which the Telecommunications Agency is operating today in competition with private industry in the telecommunications and computer sector be organized as a corporation under the Telecommunications Agency itself, or should the business be separated and be organized as a corporation directly under the State? Secondly, should the Telecommunications Agency's base organization--the part of the business which concerns the traditional monopoly jobs--be organized as a corporation or continue as a State management concern?

The Stette Committee was divided in its views on both key areas, and the statements from the hearings show the same.

In our opinion it would be completely absurd if the Storting were to make an absolute--and odd--separation of the competitive business. The telecommunications Agency has over the last two years built up an effective organization in order to give the market good supplies in the part of the terminal market directly associated with the utilization of our telecommunications network. The Telecommunications Agency is equal to meeting the telecommunications technology challenges; it can point to considerable profits, telephone waiting lines which have almost disappeared, and strong improvement in service to the public.

Now the Telecommunications Agency is confronted with a new time in which the service must find its place in a society in which telecommunications and computer technology are in the process of fusion. The idea of excluding the Telecommunications Agency from this market seems absurd. The main argument for separating the competitive business from the Telecommunications Agency's base organization is the claimed danger of cross-subsidizing, that profits from one part of the business can be used to finance another part. This is exclusively of theoretical interest. As far as accounting is concerned, there is no problem in making a separation, something which, among other things, a report produced by one of our most celebrated auditing firms clearly shows. There is also not anything in the Telecommunications Agency's history which can provide a basis for fearing such manipulations.

By the way, from the hearings round it is noteworthy that the Electronics Industry's Business Association has given its full support to the alternative of a corporation attached to the Telecommunications Agency. This organization includes all important concerns which must compete with the Telecommunications Agency in the market.

The Telecommunications Agency itself is divided regarding the question of organization of the base organization. The employees want the service to remain a management concern, while a majority of the Telecommunications Agency's board of directors and General Director Kjell Holler advocate the corporation form. Regardless of which model will finally be chosen, the most important thing must be that the Telecommunications Agency is given greater freedom of action regarding its own organization. This is a decisive prerequisite in order to ensure an efficient concern which can meet the big challenges the Telecommunications Agency is in the midst of.

8985  
CSO: 5500/2537

ELEKTRISK BUREAU EXPANDING IN SALES, RESEARCH

Oslo AFTENPOSTEN in Norwegian 20 Nov 84 p 28

[Article by Ulf Peter Hellstrøm: "Million-Kroner Contracts for EB Telecom"]

[Text] Elektrisk Bureau's Telecom division this month entered into four foreign contracts for supplying advanced communications equipment to, among others, power plants. The contracts total a value of 80 million kroner, EB Director Tore Egil Holte reports in a conversation with AFTENPOSTEN.

"We have to put our stakes on special areas within the growing telecommunications market where we gain leading authority and thereby big shares of the market," the chief of the new division says. It was previously called the telephony division and today numbers 2300 employees.

The contracts for so-called control communications will be for Pakistan, Ireland, Sweden and Saudi Arabia. The contracts will contribute to employment in the production plants in Billingstad and Hisøy.

The business unit for these communications systems within the Telecom division is counting this year on sales of about 300 million kroner, Holte relates. This is thereby the largest business unit within the division besides the separate-balance unit for the public telecommunications network, which is almost just as large in terms of sales.

The other separate-balance units within this gigantic division of the EB concern are the telecommunications terminal unit, the business unit for industrial components, and a corresponding unit for installation and service. All together, the Telecom division has reached sales of nearly one billion kroner.

Market Niches

Reorganization of the old telephony division is taking place in order to put the EB concern in a position to develop within the special market niches which the company is now banking on in order to stick to telecommunications and computer technology. "Unique products" and "market niches" are key concepts which often come up again when EB leaders like Holte must effect their business ideas.

"Within the central research and development department of our division--which alone numbers 170 engineers--and within the separate development groups of the individual business units, we have communities which in individual areas are right at the head of the line on a worldwide basis. An example is the world patent for the special module which makes it possible to transmit speech and data through a telecommunications network through a 2-wire telecommunications cable. Another example is the digital decoder which makes it possible to prevent tapping by users who do not have permission for a television channel or another kind of transmission," Holte says.

Control communications is one of the division's most important growth areas at the moment. Big organizations and services in special fields like air transport services, defense, the offshore sector, electric power and special police forces place especially strict demands on their communications equipment. The coordination of electric power from a nationwide network of power plants is an area which EB already has some experience in. Here the communications equipment must be used in order to control even the operational management of the system. This requires special systems which are also adapted to users who sit by the equipment all day long. Such extremely good communications are what EB is now to supply to the four countries for 80 million kroner.

"We have to, among other things, make systems in which high-tension lines are used to effect telephone traffic for work crews in the wilderness who are working on dams, stretches of cable or other things," Holte says.

#### The Telephone

Next year it will be 100 years since the production of telephones began in Norway. The telephone set has at certain times been a Norwegian export article, but not in recent years. EB Telecom is now aiming at making new export drives in order to sell telephones also beyond Norway's borders.

"The telephone set's life is becoming shorter and shorter. The gray telephone which had been standard until the beginning of the 1980's was developed in 1967 and sold to around 1980. Now we have a standard version of the push-button phone being sold by the Telecommunications Agency. The next generation of telephone sets is right around the corner."

[Question] When will the cordless telephone come?

[Answer] "Our version will be ready later in the new year. There are already a number of pirated telephones without a cable connection to the telephone outlet in Norwegian homes today. They have been imported and are being used without approval. Many of them do not meet international specifications, so that it is possible to experience noise in a neighbor's television set or that others' telephone conversations can be overheard," Holte says.

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CSO: 5500/2537

MINISTER REJECTS REPORTS THAT AGENCY TO EASE MONOPOLY

Stockholm DAGENS NYHETER in Swedish 16 Nov 84 p 8

[Article by Magdalena Ribbing: "Curt Bostrom: National Telecommunications Administration's Monopoly Intact"]

[Text] "The National Telecommunications Administration has taken its share of criticism lately," observed Communications Minister Curt Bostrom during the Parliament's question-hour on Thursday. "But no reduction of the Telecommunications Agency monopoly is being discussed," he said.

Two moderate members of the Parliament, Per Stenmarck and Tore Nilsson, wanted the communications minister to help ordinary citizens who have problems with the Telecommunications Agency. Margot Wallstrom, Social Democrat, wanted better opportunities for private parties to control their telephone bills.

Of the twenty million telephone bills sent out every year, there is a complaint rate of two per thousand. The disposition time for a complaint is at most two months, plus an additional month for appellate claims that are examined by the general director. Curt Bostrom reported all of this in defense of the Telecommunications Agency.

"Customers speak of abuse of power, and the Telecommunications Agency itself recognizes that it is subject to mudslinging," objected Moderate Per Stenmarck. "The public has no other option but to criticize a monopoly enterprise. It is not a matter of giving up the corporation's services or of choosing a new corporation."

"Limit the Telecommunications Agency's monopoly," demanded Stenmarck, much in the vein of his party comrade, Tore Nilsson, in Agnas, who cited Gronkoping's weekly in order to emphasize the agency's haughty attitude toward its customers.

Even Margot Wallstrom, who did not want to participate in the "mudslinging" thought she could see signs of dictatorship.

"Naturally, the Telecommunications Agency can make mistakes," said Curt Bostrom, "and of course one should behave properly toward one's customers even if one is a monopoly corporation."

#### New Bills

Next year there will be a new way the company writes bills, reports Curt Bostrom, a way that will make it easier to control its billing procedures.

"One must understand that when the Telecommunications Agency exhibits its call meters, it is to make clear to its customers the confidence that exists," Curt Bostrom pointed out and turned to Tore Nilsson, who is a Vasterbotten native, while the communications minister comes from Norrbotten.

"It is of utmost urgency to safeguard the Telecommunications Agency's monopoly, above all for sparsely populated areas which both you and I come from."

"If the good will is there, it should be praised, even if the strength is lacking," responded Tore Nilsson, citing a maxim from his schooldays.

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CSO: 5500/2518

TELECOMMUNICATIONS DIRECTOR HAGSTROM ON AGENCY'S PROBLEMS

Stockholm DAGENS NYHETER in Swedish 30 Nov 84 p 12

[Article by Ake Ortmark: "Self-Criticism by Telecommunications Director--'The Lines Will Be Really Good For the First Time in 1986'"]

[Text] Director General Tony Hagstrom is often in the center of a storm. He is so accustomed to fighting into the wind that if the wind should abate for a moment he might tumble forward.

When Hagstrom came to the Telecommunications Administration in 1977, the personnel there were really rather negative. The solemn union representatives explained that the people would have preferred a leader recruited from within. Perhaps that would also have been more in accordance with the rigid traditions of the agency. The head of the Telecommunications Administration should not be an eager government bureaucrat with commercial tendencies and ambitions to become head of a group of companies, but a calm and stable technician who, at a moderate pace, supplies the consumers with telephones and also often with the possibility of using them.

But society had changed, and so came the independent and impatient hurricane Hagstrom. The telephone had long been self-evident. The public had already thankfully received this gift from heaven. Technical development now went with dizzying speed. The combining of telecommunications and computer technology was a challenge to the old, isolated technical empire. Perhaps a social economics oriented administrator was required to discover that.

Many Positions

Tony Hagstrom had experience from many positions. He had worked in the Federation of Industries, the Concentration Commission, the Ministry of Finance and the Ministry of Industry. That is perhaps a rather good mixture for the head of 43,000 employees who invests 20 billion kronor in 3 years.

In the Ministry of Industry he was Under Secretary. That was certainly both a depressing and an instructive time.

He puts it this way:

"I had a unique overview of all the companies that failed in Sweden. The problem was often that the leadership did not concern themselves with long range questions. And effective control systems were lacking. The conclusion was that one should extend operational responsibility as far out as possible."

Therefore decentralization and profit control. People around him clearly understand that Hagstrom believes in that. In the same spirit he has fought for freedom from the government. For example the Telecommunications Administration can now borrow money freely and avoid the annual budget requests.

#### Heart on the Left

Hagstrom also wants to be a modern, powerful business leader. Such a man subdivides and compartmentalizes. For the rest, Hagstrom seldom talks about himself. But he left Government House at the same time as the first non-socialist government came in, and that can be interpreted as an indication of social democratic sympathies.

Hagstrom has also said that his heart beats on the left side. That is a far-reaching statement from a man who otherwise avoids being politically precise.

Lately the storm in Hagstrom's world has perhaps become a little more violent. The mass media have obligingly channeled a flood of agitated complaints from the public and companies to the general director. Companies are dissatisfied with bad connections on the net, for example. Furthermore they complain about hard competition from a monopoly, an almost unlikely but awful combination.

The business-freedom ombudsman, the market court, the price and cartel authorities and the National Accounting and Audit Bureau have turned sour, and behind every bush along Hagstrom's way lurks Claes Persson in the competing firm CPO, the small businessman who thinks he has been seriously damaged by a merciless and tax-cheating steamroller.

#### Trouble on the Line

Perhaps Hagstrom is fortunate that nobody has tied knots in the telephone lines. In Hagstrom's Sweden one can not make an unimpeded call. All too often in the receiver one hears crackling and busy signals. Subscribers who have traveled claim that it is better abroad.

It is a thundering failure. The Telecommunications Administration would then not succeed in solving the most elementary of all problems, despite all the investment in expansion, service, charm and market orientation. The demands are also especially hard on an agency which claims to be technologically very advanced, and which developed the famous AXE system together with Ericsson.

Hagstrom is concerned about that very point:

"I am concerned that we are not coming through over the lines. It is getting better. But it will not be good before 1986. But by the devil it will be good then."

According to Hagstrom the explanation for the difficulties is partly the "enormous fast growth of computers" and partly the changeover to AXE stations. But he also admits that almost without a doubt the agency itself has caused a large part of the demand growth by the eager commercial investment in computer service and mobile telephone systems.

#### Proud Director

Otherwise Hagstrom is a proud director general. His and his coworkers' attitudes toward the critical outside world is summarized rather clearly in a statement of Marketing Director Ingemar Wahlstrom:

"Sweden has the best, cheapest and the densest telephone system in the world."

The debate-happy Hagstrom enjoys proving that it actually is cheap or even cheapest to telephone in Sweden, while it is most expensive in Norway. Recently the Nordic telephone chiefs testified at a question period in Switzerland arranged by the European Management Forum. Hagstrom began by demonstrating with an impressive diagram which disclosed that Sweden is at the absolute top and poor Norway is at the absolute bottom. It was a presentation which made an effective introduction for speaker number two, namely the telecommunications chief from Norway.

But then there is an input of self-criticism in the optimistic commercial atmosphere. Hagstrom admits that he is now forced to devote much time to discussing service problems. The intention is of course that businesses will have the same service as their competitors in other countries--if they pay for it.

#### Union Concerned

That policy concerns the union, which fears that a special unit for service to the big customers will first be turned into a division and then to a separate company. The extension of that threatens definite damnation: privatization.

But most indications are that the future Telecommunications Administration is going to look about as Hagstrom wants it to. Nobody believes that he will let anything go unnecessarily. Perhaps it was in Government House that he learned his diplomatic talent, the ability to play on exactly that string which for the moment can find public support.

In relation to Ericsson, Hagstrom appears in four different rolls. He is a customer of Ericsson, he is a competitor through the agency's workshops,

he is a cooperative partner in Ellemtel (the AXE system) and he is finally the controlling authority.

The Telecommunications Administration and Ericsson live in a marriage which is marked by mutual respect and continuous efforts to advance positions. Of course Ericsson is normally the attacking party.

"We want the agency's monopoly to end at the jack on the wall," said Bo Landin, marketing director at Ericsson. "It is not too important if they sell some more telephones, but business exchanges are a strategic product. In the organizations of the future they will be the key products in integrated systems. Today one cannot build a private net and connect computers and terminals as long as they do not connect to the telecommunications net."

#### Area of Conflict

This is the very center of conflict in that partly tense marriage. Managing director of Ericsson Bjorn Svedberg has had contact on this question with both the Telecommunications Administration and the government:

"I actually believe that the leadership of the Telecommunications Administration understands our wishes, but they want to take longer for the changeover to a free market than I consider necessary."

But realistic politician Hagstrom is not willingly going to let go of any part of the market. He is ready to give up the monopoly on telephone sets, since "the citizens still have not accepted the Riksdag decision," but he regards the exchanges as a part of the net itself, and the net was ordained by a higher authority.

And behind him or beside him or under him, Hagstrom has a very satisfied minister of communications:

"The Telecommunications Administration is an agency which makes a minister of communications happy."

And the other day in the Riksdag:

"The Riksdag decision on regulations for the monopoly of the Telecommunications Administration remains unchanged."

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CSO: 5500/2543

SWEDEN

ERICSSON FORMS SUBSIDIARY FOR MAKING MOBILE TELEPHONES

Stockholm SVENSKA DAGBLADET in Swedish 16 Nov 84 p III

[Article by Erica Almgren: "Ericsson Forms Subsidiary for Mobile Telephones"]

[Text] Ericsson Radio Systems AB is investing in forming an independent subsidiary company. It is expected that during 1985 the sales of mobile telephones in Sweden will increase by 10 percent.

Today the LM Ericsson subsidiary company has fully 20 percent of the market. From the new head office in Rissne in Sundbyberg which was dedicated on Thursday they expect to sell 5,000 mobile telephones per year, an increase of 2,500.

"We shall concentrate entirely on Sweden," said Lars Berg, managing director.

One hundred fifty employees are moving from the subsidiary in Kista to the new subsidiary Radio Systems AB Sverige. There are about 40 new employees. The new company will have about 400 employees and the annual sales at the start are estimated at at least 300 million kronor.

"The next generation will go around with portable telephones which can be taken along everywhere," said Lars Berg.

The Swedish subsidiary will exclusively devote itself to national marketing, installation and service of civilian mobile systems, mobile telephones and paging systems.

The company will have its own managing director and management in the 3,700 square meter main office. The landlord is Sundbyberg municipality, which is pleased with the new tenant in the Rissnes industrial area.

"There will be no tax money, but there will be work on the place, and that is of course positive," said Jan-Olof Rosander (social democrat), chairman of the municipal government.

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CSO: 5500/2543

#### ERICSSON RUNS INTO PRODUCTION DISRUPTION PROBLEMS

Stockholm SVENSKA DAGBLADET in Swedish 20 Nov 84 p 33

[Article by Elisabeth Sandlund: "Setback in the Fall for Ericsson"]

[Text] Production disruption and unexpected cost increases for new products have caused Ericsson to report a loss after financial net of 37.3 million kronor for the third quarter. Ericsson does not now dare hope to equal 1983's yearly profit.

For the entire 9-month period including September profit after financial net was 851.6 million kronor, which is an increase compared with the same period in 1983 (771.0). Sales rose by 18 percent to 19.4 billion (16.4). Orders increased still more--by fully 30 percent.

#### Disruptions

Also during the third quarter orders increased more than expected. But because of production disruptions--mainly shortage of components within important units--sales could not increase by more than 13 percent.

And the profit for the period July-September was "considerably weaker than expected," it said in the quarterly report. In 1983 the profit after financial net was 90.4 million kronor compared with a loss this year of 37.3 million kronor.

The problem is most serious in the Information Systems area, which is the second largest in the group with 30 percent of the total sales. Also in Radiocommunications it went worse than expected. The reason is partly shortage of components and partly the fact that the costs for new products increased more than expected, something that could not be compensated for by higher prices.

For the firms with which Ericsson cooperates the profits were positive. On the other hand the investment in the United States has not yet borne fruit. Half-owned Ericsson Inc. still reports unsatisfactory results. For the first 9 months Ericsson's share of the loss rose to 154 million kronor.

## New Leadership

The quarterly report says that measures have been taken to correct the profit outcome. Information Systems has been reorganized and has new leadership. Also within Radiocommunications changes are taking place in the product program.

But no significant effect from these measures on the profits is expected before the beginning of next year. Neither will the delivery of components be normal before then. This means that the forecast is reduced. Ericsson now does not expect this year to attain the same annual profits after allocations and taxes as in 1983, when they rose to 1,178 million kronor.

	<u>June-September</u>	
	<u>1984</u>	<u>1983</u>
Sales	19,357.4	16,394.0
Profit after depreciation	1,565.1	1,466.7
Financial net	-713.5	-695.7
Profit after financial net	851.6	771.0
Profit share of cooperating companies	66.8	-19.9
Minority share	35.8	145.2
Profit before allocations and taxes	954.2	896.3
Profit per share after taxes	19:71	18:77
" " " calculating latent tax on allocations	14:20	10:94

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CSO: 5500/2543

SWEDEN

TELECOMMUNICATIONS AGENCY TO COMPETE IN NEW SERVICE AREAS

Stockholm DAGENS NYHETER in Swedish 21 Nov 84 p 11

[Article by Ake Ortmark: "Telecommunications Administration Launches Strong Counterattack--Challenges Both IBM and the Unions"]

[Text] The Telecommunications Administration will beat IBM, Ericsson and all the other competitors in the communications field. The agency will be the best, and considered to be the best--when the crisis of confidence has been suffered through. "Our chance lies in being the best," they simply say.

That is the optimistic and aggressive spirit which is spreading in the gray concrete building which is the main office of the Telecommunications Administration in Farsta, outside of Stockholm, from which 43,000 employees are directed.

The man who will lead the continued Swedish march into the computer and communications field is the controversial chief Tony Hagstrom, Sweden's largest investor, 20 billions in 3 years.

Hagstrom hastens down the chief's corridor past the heavy portraits of his predecessors since 1853 at a speed which indicates that he wants to liberate himself from ancient ideas and structures.

Cheered on by his closest colleagues, the director general will now conquer the bureaucracy which for too long has been dominated by the so-called tyranny of mediocrity.

"We must compete on like terms with our competitors," said one of Hagstrom's colleagues. "We must be able to promote talented personnel swiftly and pay them competitive wages. It does not work to pay 70 percent of market wages to qualified personnel, but 105 percent to office clerks."

The union representatives are squirming unhappily in the tougher commercial climate. The demand for market orientation with all it involves is a challenge in several directions.

Competitors of the Telecommunications Administration have also perceived the storm warning. In the internal newspaper VERKET & VI Berne Lundgren (now managing director of a subsidiary company Telealarm AB) tells of the "powerful process of change."

"It means that in the eyes of the customers we will be better than all the already established communications firms such as IBM and Ericsson, but also better than the firms which are on their way into the communications market."

#### Lived Undisturbed

The same message is found in the smooth brochure which describes for the employees the agency's "march into the future," the process which will be clarified in 1985.

"Previously we lived undisturbed in our own technical empire. That was in the old electromagnetic time. Today the entire world is going over to microelectronics and radiotechnology. Effectively. But we are no longer alone."

And now the national telephone monopolies are creaking at the joints all over the world.

"It does not work to pass laws against technological development. The current 'monopoly protection' is no protection at all. Our big chance lies instead in continuing to be the best."

#### Hard Boundaries

It is a matter of telecommunications and computer technology blending together. Competition is increasing in telecommunications. Firms which manufacture computers and office equipment can suddenly offer alternatives to traditional telephone services, at the same time as the Telecommunications Administration is eyeing new products and markets. That is the collision of the 80's between branches of business.

This was about how the then Minister of Communications Ulf Adelsohn reasoned in a bill in 1980. It was there that the state began to draw conclusions from the new technology. At the same time the fragile and protected boundary between the monopoly of the Telecommunications Administration and the competitive sector was established.

The Telecommunications Administration then had its monopoly protection formalized by a nonsocialist government, while the terms for the "powerful change" were dictated by Social Democratic politicians.

The agency is now riding forward on the not insignificant wave of renewal which is sweeping through the public sector. Finance Minister Kjell-Olof Feldt describes the agency's new freedom in an interview book in this way:

"The Telecommunications Administration now has a free hand to expand and invest without having to go and beg for money in Government House."

#### Borrow Openly

The Telecommunications Administration is also largely disconnected from the national budget and appropriations presentations. The agency can borrow on the open market in largely the same way as any company. The pleasant result is that investment decisions have become more independent of tax policy. It is not necessary to raise taxes in order to provide short term financing for both investments and operating costs. Policies can be made more flexible with the aid of the loan market.

The new Telecommunications Administration is controlled by the government through the requirement for profitability and the rolling 3-year plans which replace the traditional appropriations presentations. The director general himself has maintained that the requirement for profit be specified, and he has recommended a real interest rate of 3 percent on own capital. When Tony Hagstrom in one of his guises was the chairman of a wage earner fund he not surprisingly met the same rule of thumb.

During some years the Telecommunications Administration has had difficulty in meeting the profit requirement, but now it is doing it fairly well. Since the monopoly sector is so large, the agency is now working with the measurement of productivity. Labor productivity (measured as production volume increase per employee) should increase by 5 percent per year.

Productivity improvement should make it possible for the agency to reach an important goal: the tax level will increase slower than the consumer price index. On that point the agency's representatives are very satisfied, and they point out that the customers should also be. Telephone costs in Sweden are low.

But despite the reorganization and successes, the Telecommunications Administration is an agency in crisis. The public complains about difficulties in getting fair treatment from an insensitive bureaucratic giant. Companies criticize lack of efficiency; the net does not work.

And the agency's competitors on the expanding new market maintain that the agency is building up an economic power position with monopoly support.

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CSO: 5500/2543

END